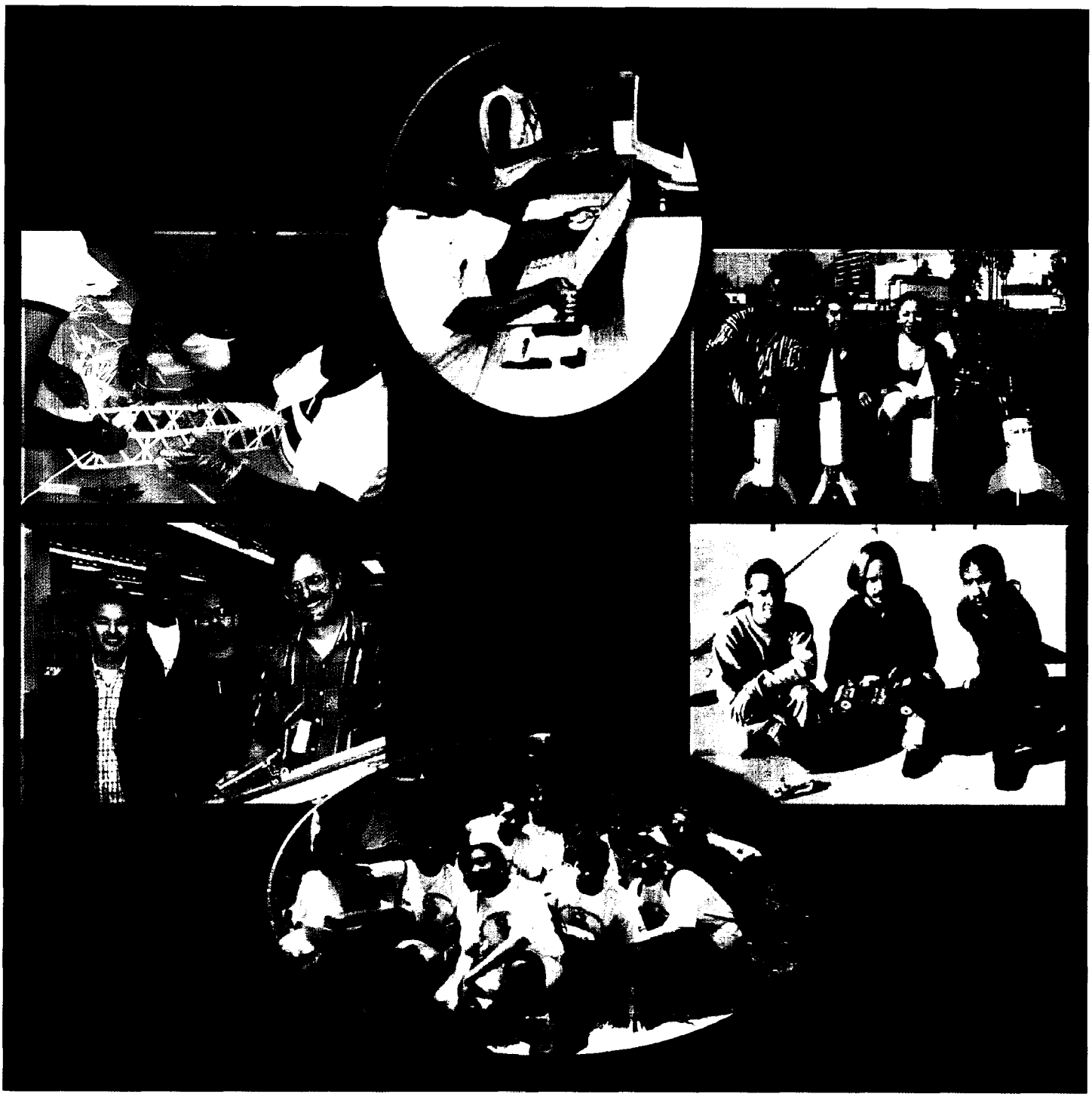
U.S. Department
of Transportation

Federal Highway Administration

1999
National Summer Transportation Institute
National Resource Center
Final Report



Report No. FHWA-CR-01-002

FOREWORD

This report summarizes the accomplishments of the 1999 National Summer Transportation Institute (NSTI) and the National Resource Center (NRC). This Final Report includes information about program management, finance and budget, and data collection activities. It contains a summary of the 30 Summer Transportation Institutes, their associated costs, and other pertinent information.

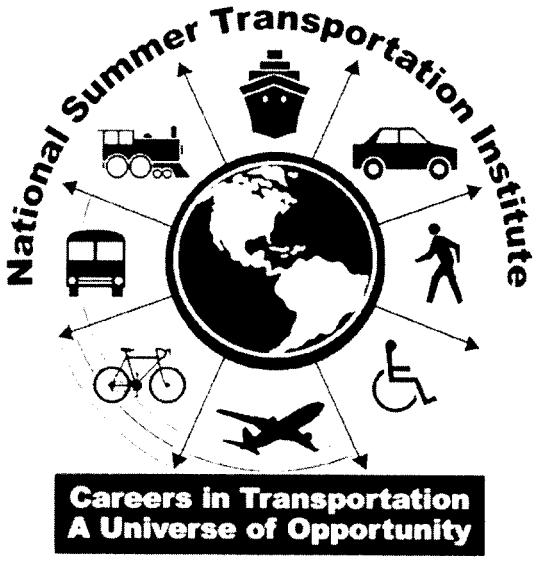
Dr. Clarence Hill, Director
National Summer Transportation Institute
National Resource Center

NOTICE

This document is based on work supported by the Federal Highway Administration under Cooperative Agreement No. DTFH61-99-X-00013.

1999
National Summer Transportation Institute
National Resource Center

Final Report



Program Manager:
Hattie Brown

Report No. FHWA-CR-01-002

"What STIP Means to ME"

By Brandi Berry

STIP means Summer Transportation Institute Program, but this is what it means to me. . .

The "S" stands for Significant young men and women that are successful in school and all the things we put our minds to do.

The "T" stands for Tremendously hard work we all put into making ourselves better students.

The "I" stands for Illustrating our skills and talents in our classes, to our teachers, and everyone who believes that our best is great.

The "P" stands for Productive young men and women doing their best to make their mark in history from the skills we are learning today!

TABLE OF CONTENTS

TABLE OF CONTENTS *(continued)*

LIST OF TABLES AND APPENDICES

LIST OF TABLES

LIST OF APPENDICES

I. BACKGROUND

This document summarizes the accomplishments of the 1999 National Summer Transportation Institute (NSTI).

On February 5, 1999, Federal Highway Administration Deputy Administrator Gloria Jeff and South Carolina State University President Leroy Davis signed a cooperative agreement officially establishing the NSTI and designating South Carolina State University (SCSU) as the National Resource Center (NRC) responsible for the management of the Institute, ensuring consistency among the host sites and procedures.

Through a cooperative agreement, SCSU was awarded $1,500,000 for the 1999 NSTI from the Federal Highway Administration (FHWA). SCSU entered into sub-agreements with 30 colleges and universities that served as host sites in twenty-two States and the District of Columbia to implement and conduct a Summer Transportation Institute (STI) on their campuses. Support from State Departments of Transportation (DOT), FHWA Division Offices, transportation agencies and private sector partners continued to expand during the 1999 NSTI introducing 645 secondary school students to transportation-related careers. Thus, the total number of youth exposed to career opportunities in the transportation industry as a result of the NSTI was increased to 1,931.

The concept for the STI was developed through the cooperative effort of SCSU, the South Carolina Department of Transportation (SCDOT), and the FHWA South Carolina Division Office. In the summer of 1993, 20 South Carolina students attended the first pilot STI at SCSU. In 1999, there were 30 colleges and universities serving as host sites, with State transportation agencies and FHWA Division Office personnel supporting the STI with funding and through actual involvement in the Institutes.

The success of the NSTI demonstrates how this partnership is able to attract youth to the transportation field. The establishment of additional Institutes at other colleges and universities has significantly enhanced this outreach effort to encourage youth to pursue career opportunities in transportation. With minimal financial investment in this Institute, the FHWA and State transportation agencies can effectively change the diversity of the transportation community. To reach its full potential, a commitment of continued support and funding is also needed from the FHWA and State DOTs.

II. NATIONAL SUMMER TRANSPORTATION INSTITUTE (NSTI)

In support of the following Executive Orders:

Executive Order 12876: Advance the development of human potential, to strengthen the capacity of Historically Black Colleges and Universities to provide quality education, and to increase opportunities to participate in and benefit from federal programs

Executive Order 12900: Strengthen the Nation's capacity to provide high-quality education, and to increase opportunities for Hispanic Americans to participate in and benefit from federal education programs

Executive Order 13021: Establish a mechanism that will increase accessibility of federal resources for tribal colleges and universities in tribal communities

The USDOT and FHWA officially established the NSTI, one of several educational initiatives under the Garrett A. Morgan Technology and Transportation Futures Program (GAMTTFP). Congress affirmed its interest in and support of the NSTI by authorizing its funding in TEA-21 under the FHWA On-the-Job Training Supportive Services (OJT/SS) Program.

The NSTI is designed to:

- expose secondary school students to a series of academic and practical experiences designed to motivate them toward professions in the transportation industry; and
- provide secondary school students with mathematics, science and technical enrichment to enable them to pursue a career in the transportation industry.

III. NSTI NATIONAL RESOURCE CENTER (NRC)

SCSU, continuing in its role as the NRC, served as:

- the program management center,
- the financial center, and
- the data reporting clearinghouse

It developed, published and distributed curriculum, instructional and resource materials, conducted workshops to train host site staff, provided ongoing technical support, and established program guidelines for participating host sites. Budget and finance activities included developing and executing the overall budget for the NSTI, developing reimbursement procedures, working with the financial requirements of 30 host sites, and reimbursing them for expenses associated with conducting the 1999 STIs. The NRC also created and maintains several databases containing information about host sites, STI participants, and advisory boards were created. The NRC continued to market and develop partnerships with transportation-related agencies, businesses, and national and community organizations to further promote the NSTI. A website was launched to further assist with marketing and management of the NSTI.

PROGRAM MANAGEMENT

The NRC, as the program manager for the NSTI, was responsible for:

- developing procedures and guidelines for conducting STIs
- training host site staff
- providing technical support to the host sites that serve as host sites, and
- managing the activities of the host sites

PROCEDURES AND GUIDELINES

The NRC developed procedures and guidelines for host sites to successfully conduct STIs. They included financial reporting and reimbursement, selecting student participants, securing speakers and presenters, evaluating program components, and scheduling field trips. In addition, guidelines were revised for curriculum, evening/enhancement programs, sports/recreation/weekend programs, staffing, and Final Report preparation. These procedures and guidelines were included as a part of the *1999 NRC Administrative Manual*.

TRAINING AND TECHNICAL ASSISTANCE

The NRC conducted a 1999 Training Workshop, April 1–2, 1999, at the Hyatt Regency in Atlanta, Georgia. In addition to 51 representatives from host sites, nine State DOT representatives, 13 FHWA division office representatives, and five US DOT representatives were in attendance. Sessions on program management, data collection, financial management, evaluations, the STI sub-agreement and the final report were presented by NRC staff. The training workshop agenda and attendee roster are included as Appendices A and B, respectively.

Additionally, the NRC provided technical assistance to host sites at various levels. It helped STIs in developing curriculum, preparing budgets and Final Reports, and conducting required evaluations.

The NRC also trained STI Project Directors on how to select key staff, prepare materials, select participants, publicize activities, and schedule field trips. In addition, site visits were made to host sites on an as-needed basis.

BUDGET AND FINANCIAL CENTER

FINANCIAL MANAGEMENT/OVERALL BUDGET

As the budget and finance center, the NRC established a budgetary process and overall budget for the NSTI. The overall budget was developed based on the project proposals submitted by host sites and the allocations to the NRC for administrative costs. The NRC distributed funds among the 30 host sites based on the approved budget for each host site. The amount awarded to each host site ranged from $25,000 to $52,942.

The total reported expenditures of the individual Institutes varied from $25,000 to $100,329. *Table 1* shows the award amount (federal share), total reported cost for each Institute, and reflects the federal share as a percentage of the total reported cost of the Institute. The estimated total reported cost of each Institute is based on information provided to the NRC by each host site Project Director. In many cases, Project Directors have not included in-kind or other costs absorbed by host sites. An analysis of the data shows that the total federal share represents about 73% of the total reported cost of the Institute. The University of Missouri–Rolla reported the smallest ratio of federal share to total reported cost (37%) while several host sites reported the ratio of federal share to total reported cost to be 100%. This latter ratio is most likely because those host sites did not calculate in-kind and other "hidden" matching amounts contributed by the participating college or university.

DATA REPORTING CLEARINGHOUSE

As the data reporting clearinghouse for the NSTI, the NRC collected data for analysis of the STI participant population and their potential movement into transportation-related careers. In serving as the data reporting clearinghouse, the NRC published a directory of Project Directors, collected data on applicants, recipients, and STI graduates, and prepared a report of the demographics of STI participants.

HOST SITE MANAGEMENT

As the program management center for the NSTI, the NRC allowed host sites to operate as a non-residential or residential STI. It ensured that all host sites presented quality academic programs that introduced participants to all modes of transportation and transportation-related careers. While host sites were provided assistance and guidance on requirements for how to implement their STIs, some independence and flexibility were allowed in the actual delivery. A detailed curriculum was required of each host site.

Residential programs required three components:

- an academic program,
- an evening/enhancement program, and
- a weekend/recreation sports program

Non-residential programs required two components:

- an academic program and
- an enhancement program

Additionally, each host site was required to:

- establish an Intermodal Advisory Board (IAB) to review program proposals and curriculum, assist with planning and securing funding, and provide technical assistance.
- use the student selection criteria designed by the NRC; however, individual sites were allowed to raise, but not lower, the 3.0 GPA requirement.
- mail applications to public and private secondary schools in their States.
- administer weekly evaluations and an overall program evaluation to be used for internal program assessment. (The results of the evaluations were summarized and are included in this report as *Tables 6, 7, 8,* and *9.*)

Each Institute was led by a Project Director whose minimum duties were described in Part I of the *1999 NRC Administrative Manual.* Among other duties, the Project Director was required to:

- create job descriptions, supervise the STI staff, and host an orientation and closing awards ceremony.
- consolidate student demographic data including the name, social security number, home address, and the high school and guidance counselor's names.
- submit monthly progress reports, a STI final report on their activities within 60 days of completion of their STI activities, and a STI final financial report within 30 days after submitting the final report.

COST OF INSTITUTES

The federal share per student ranged from a low of $652.17 to a high of $3,000. The average federal share per student for residential programs was $1,631 and for non-residential programs was $1,729. Residential programs' federal share per student ranged from a low of $652 to $2,917. For non-residential programs the federal share per student ranged from $899 per student to $3,000. *Table 2* shows the federal share per student and the total reported cost per student for residential programs. *Table 3* provides the federal share per student and total reported cost per student for non-residential programs.

REIMBURSEMENT

The NRC revised the process to reimburse host sites for approved STI expenses. The reimbursement process requires signatures from both the university/college financial officer and the STI Project Director. Host sites can submit reimbursement requests no more than twice monthly using the NRC-supplied cost reimbursement form (NRC269). The form and a computerized summary of account activities for the given period must be submitted by the University or College Financial Officer.

HOST SITE DEMOGRAPHICS

Demographics analysis of the 1999 STI participants revealed a successful approach to carrying out the aforementioned Executive Orders 12876, 12900, and 13021. The 1999 NSTI introduced 576 minority participants to transportation careers. Secondary school students from 212 cities and 125 counties across the country participated in the 1999 NSTI. The group consisted of 76 Native Americans, 423 African–Americans, 51 Hispanics, and 21 Asian Americans. *Table 5* provides a demographic summary of STI participants. The NRC maintains a complete listing of 1999 NSTI participants.

SITE VISITS

The Center staff conducted site visits to:

Albany State University	June 3, 1999
Clark Atlanta University	August 4, 1999
Florida International University	June 8, 1999
Florida A&M University	June 10, 1999
Bethune–Cookman College	June 9, 1999
Morgan State University	July 26, 1999
Southern University and A&M College	August 19–22, 1999
Jackson State University	August 12, 1999
Delaware State University	July 23, 1999
Howard University	July 21, 1999

INTERMODAL ADVISORY BOARDS

Each host site was to establish an IAB with minimum-required representatives from their State DOT and the FHWA. The boards represent a diverse group of transportation professionals with a demonstrated interest in increasing the number and diversity of qualified individuals entering the transportation profession. Appendix D contains a listing of STI IAB members.

PARTICIPANT DATA

The NRC collected data on applicants, recipients, and graduates of the STIs. The data reveals that there were 931 applicants; 645 agreed to attend STIs and 623 graduated. Contact information collected on participants included names, social security numbers, addresses, schools, and guidance counselors. This information will be used to conduct follow-up surveys and maintain contact with the participants and graduates.

SENIOR YEAR SURVEY

Since there were no seniors among the 1999 participants, the first senior year survey will be administered in 2000.

EVALUATIONS

Each host site was required to administer weekly evaluations in order to provide immediate feedback on program effectiveness. An overall evaluation was administered during the latter half of the last week of each Institute. The overall evaluation sought impressions about speakers, staff, program activities, and field trips. Additional information obtained from host sites focused on length of the Institute, accommodations, social atmosphere, etc. In general, participants felt that the program length of the Institute was appropriate, field trips were fun and appropriate, and the sports and recreation programs were adequate. Ratings for cafeteria food service were predicably less favorable.

All evaluations used a rating scale from 1–4 (Strongly Agree–Strongly Disagree) and the mean average response was reported.

Speakers

Responses to four statements about the effectiveness of the speakers at each host site were tallied. The results show that, on average, participants found that the information presented by speakers was clear and interesting, that participants learned something new about transportation careers, and that speakers tended to respond well to questions and appeared to be excited about the Institute. *Table 6* shows the mean response to each speaker evaluation question.

Field Trips

Responses to four statements about the impact of field trips taken by each host site were tallied. The results show that, on average, participants found that the field trips were informative and interesting, added realism to the topics covered, and helped in understanding topics covered by speakers. *Table 7* shows the mean response to each field trip evaluation question.

Activities

Responses to three statements designed to measure the appropriateness of project activities at each host site were tallied. The results show that, on average, participants found that the project activities helped to understand topics covered and provided practical experience related to transportation topics. *Table 8* provides the mean response to each activity evaluation question.

Staff

Responses to five statements about the effectiveness of each host site staff were tallied. The results show that, on average, participants found that the host site staff members were very helpful, interested in participants becoming aware of transportation careers, had good attitudes toward academic excellence, and were encouraging and available when participants had questions. *Table 9* provides the mean response to each staff evaluation question.

IV. STI SUMMARY REPORTS

Alabama A&M University, Normal, AL

Type of Program:	Non-residential
Start Date:	June 21, 1999
Number and Year of Students:	19 Middle School Students
Project Director:	Unavailable
Partners and IAB:	Unavailable

The Alabama A&M STI provided a stimulating introduction to the transportation industry. The curriculum exposed participants to various transportation careers and special activities including:

- highway design
- transportation of people and cargo
- intermodalism
- airport operations
- space travel
- the movement of goods through operation of river locks
- a goals and values workshops
- college entrance test-taking skill sessions
- drug awareness education
- a variety of field trips and student projects

Weekly activities focused on four modes of transportation:

- highway
- rail and mass transit
- air and space
- water

Professionals who worked in related areas made presentations, and participants visited businesses and government agencies for field observations.

RECOMMENDATIONS

- Identify funds to establish a response center for the STI;
- Expand STI curriculum to include non-technical areas related to the transportation industry;
- Identify and allocate funds for the 2000 STI by December 1999;
- Seek additional sponsors for the STI; and
- Continue to identify sources of funding from the FHWA and other sponsors for expanding the STI.

Albany State University, Albany, GA

Type of Program:	Non-residential
Start Date:	June 7, 1999
Number and Year of Students:	13 High School Students
Project Director:	Unavailable
Partners and IAB:	Unavailable

The objective of the Albany State University STI was to introduce a diverse population of high school students to land, air and water transportation. The program began with an orientation day where participants were introduced to the modes of transportation and were assigned a five-page (typed) research paper with full references covering one of the modes. The research papers were collected during the last week of the Institute.

There were presentations on each mode, during which participants were required to take notes in a daily journal and were given the opportunity to ask questions following each presentation. In addition to academic workshops, participants were given a daily one-hour recreational period at the Student Union. They also had a picnic at Lake Chehaw and Wild Animal Park and went swimming at Jekyll Island in Brunswick, GA.

Participants evaluated programs, faculty, and the educational components on a weekly basis. The faculty and Project Director evaluated course content, student projects, laboratory experiences and unit objectives.

RECOMMENDATIONS

- Conduct training workshop in January 2000;
- Expand program objectives to include student mentoring and follow-up; and
- Improve marketing strategies to include direct contact with secondary schools.

Arizona State University, Temple, AZ

Type of Program:	Residential
Start Date:	June 7, 1999
Number and Year of Students:	46 High School Students
Project Director:	Ms. Cathryne Jordan
Partners and IAB:	Arizona Division Office, Arizona Department of Transportation (ADOT), and Arizona State University

The academic program was designed to introduce civil engineering to the participants with emphasis on transportation engineering. Classroom activities were designed to expose participants to:

- transportation terminology
- different modes of transportation
- factors considered in the design of different transportation facilities

The curriculum was presented through presentations, lectures, laboratories, computer exercises and project design, and building.

Participants evaluated the general program structure, curriculum, general project design, enhancement activities, guest speakers, and field trips.

RECOMMENDATIONS

- Continue to seek additional partners and sources for participation and funding; and
- Include students entering their junior year.

Benedict College, Columbia, SC

Type of Program:	Residential
Start Date:	June 20, 1999
Number and Year of Students:	16 High School Students
Project Director:	Dr. Robert L. Scott
Partners and IAB:	SCSU, FHWA South Carolina Division Office, South Carolina Department of Transportation (SCDOT), Columbia Metropolitan Air Port, South Carolina Department of Public Safety, Richland County School District One, Hayward Career and Technology Center, and Benedict College

This STI consisted of classroom instruction, laboratory exercises, field trips, speakers, and recreational activities. A wide range of activities exposed the participants to:

- intermodalism
- land transportation
- air transportation
- water transportation

Benedict College faculty provided classroom instruction, and hands-on activities were taught by a certified industrial technology high school teacher.

Several government agencies provided speakers, activities and field trips for the program. Some of the agencies included the Police Academy, South Carolina Port Authority, Columbia Metropolitan Airport, South Carolina Department of Public Safety, South Carolina State Museum, South Carolina Parks, Recreation and Tourism, Atlanta Georgia's MARTA System, FHWA, and SCDOT. An IAB helped to interpret rules and regulations, develop schedules, and provide lectures and leadership.

Strong support for the STI was given by the SCDOT and FHWA personnel in both direct funding and participation. The overwhelming success of the Benedict College STI demonstrates how this partnership was able to attract youth to a quality program that provides knowledge of the transportation field. The resource persons and direct funding from the SCDOT and FHWA had a positive impact on the success of the project. According to a recent study conducted by the College Placement Council (CPC), the high demand for graduates in Engineering, Science and Technology will continue into the next century. The STI is a unique concept that provides orientation to engineering and technology and creates an awareness of the attractive career choices and opportunities that exist in the transportation industry.

RECOMMENDATIONS

- Increase funding to pay for additional aides and certified drivers;
- Expand the cooperative agreement to include follow-up visits for participants;
- Increase funding for one mid-winter banquet for participants to meet and interact with transportation professionals; and
- Maintain the current, well-planned format.

Bethune–Cookman College, Daytona Beach, FL

Type of Program:	Residential
Start Date:	June 27, 1999
Number and Year of Students:	16 High School Students
Project Director:	Mr. Clifford Barnes
Partners and IAB:	FHWA Florida Division Office, Florida Department of Transportation (FLDOT), Florida East Coast Railway Co., and Volusia Transit Authority

The enrichment program was designed to teach the participants the elements of building rocket systems and how these systems operate. In this module, students were able to:

- demonstrate proper safety procedures
- learn how to use mathematical equations to determine altitude, speed, and velocity
- design and construct a rocket so that it will be stable, has minimum drag, and maximum momentum
- write scientific reports to include and calculate results

The Evening Enhancement Program was also an effective tool used to:

- provide a method of increasing the participants' vocabulary by using board games
- offer an outlet for relaxation
- develop interpersonal relationship skills via role-playing
- improve decision making skills relative to what is "right" or "wrong"

California State University, Los Angeles, CA

Type of Program:	Non-residential
Start Date:	July 26, 1999
Number and Year of Students:	20 High School Students
Project Director:	Dr. Haasan Hashemian
Partners and IAB:	City of Los Angeles, the California Department of Transportation (CALTRANS), and the FHWA Division Office

This Institute responded to the national need to recruit secondary school students into the transportation field. Tailored to specific needs and capabilities of the campus, the Institute enabled California State University, Los Angeles (CSULA) to provide an orientation to engineering and technology programs and to create an awareness of the attractive career choices and opportunities that exist in the transportation industry.

The purpose of the 1999 CSULA STI was to stimulate transportation career interests in secondary school students in order to increase the numbers who choose a career in the transportation industry. The STI was established through the cooperative effort of CSULA, the NSTI Resource Center, the FHWA California Division Office, and CALTRANS. Participants gained an awareness of how transportation services are planned, designed, and organized, as well as how the many functions, resources, and relationships must be coordinated to effectively deliver transportation services in large metropolitan areas. The STI participants were introduced to a wide range of transportation activities in land, air, water, space, and intermodalism. Learning was reinforced through presentations by professionals, projects, and field trips to many transportation facilities.

The program covered many aspects of transportation including:

- transporting of people and cargo
- management of systems
- innovations
- careers
- intermodalism
- social, economic, and environmental impact of transportation systems
- safety
- construction skills and technology
- research and technology, and its application in the transportation industry

Each week's activities included:

- an introduction to a transportation mode and its role in society
- activity-based presentations by professionals
- field trips to transportation agencies and facilities
- exciting hands-on projects
- computer applications and programming

The STI enhancement/enrichment workshops exposed participants to methods and activities which improve study habits and enhance academic achievement. The workshop included preparatory sessions in mathematics and physics, writing, computer and study skills, and college preparation such as the Scholastic Aptitude Test (SAT).

Given such a busy schedule, the STI participants spent minimal recreation time — about two hours a week to play basketball, softball, or swim in the campus pool. The sports activity helped to reinforce the community emphasis of the Institute and reduce some inhibitions about participating.

Participants' academic progress was monitored each week to assess the effectiveness of the program components. The evaluation process measured scholastic performance, ability to work in interdisciplinary teams, and communication and leadership skills.

Participants completed weekly program and faculty evaluations, while the Project Director and faculty reviewed the course contents, student projects, and laboratory experiences. Process and outcome evaluation data relative to each academic module and the overall program were gathered from participants and faculty and analyzed to measure the success of the Institute.

The NSTI reports that the program was extremely successful, in part due to the strong support from the City of Los Angeles, CALTRANS, the Federal Aviation Administration (FAA), the United States Coast Guard (USCG), CALTRANS, the FHWA Division Office, the American Society of Civil Engineers (ASCE), the Institute of Transportation Engineers (ITE), the Mathematics Engineering Science Achievement (MESA) program, and many other public and private transportation agencies. The closing program was well attended by the participants and their parents, faculty and university staff, city and State DOT, FHWA and FAA officials. The CSULA has accomplished its goal of meeting the STI objectives to stimulate transportation career interest in secondary school students. The university has a continuing commitment to provide quality educational opportunities and seeks to expand its efforts to assist young students.

RECOMMENDATIONS

- Select the host sites early and conduct the training workshop in January 2000;
- Provide university scholarships to former STI participants;
- Increase funding for universities in major metropolitan areas;
- Allow participants to receive stipends; and
- Allow more time for the final and financial reports.

Cheyney University of Pennsylvania, Cheyney, PA

Type of Program:	Residential
Start Date:	July 12, 1999
Number and Year of Students:	20 High School Students
Project Director:	Dr. Kwo-Sun Chu
Partners and IAB:	Pennsylvania Department of Transportation (PennDOT), Philadelphia School District, FHWA Eastern Resource Center, Coatsville School District, KRAPF Transportation Company, and Southeastern Pennsylvania Transportation Authority (SEPTA)

The curriculum consisted of a mix of classroom, hands-on activities, field trips and speakers centered around a different transportation mode each week. However, due to the late start of the Cheyney STI, materials were received late, and some activities had to be scheduled in "off-modal" weeks. Weekly field trips included a ride on the Strasburg railroad, a functioning steam engine; a tour of the railroad museum; a bridge site that PennDOT was constructing on I-95; a trip to the Limerick Nuclear Power Plant and a regional energy grid to learn about the relationship between energy and transportation. Other trips included visits to the Helicopter Museum; the SEPTA, where participants observed the computerized train scheduling system; and the Coast Guard Training Center in Cape May, New Jersey, which included a tour of two of the Coast Guard cutters. Students also met with a local model airplane club during one of their flying sessions. The highlight of the trip was the visit to the Delaware State Airways Program at Delaware State University where participants flew in the trainer planes used by the Airways Program.

Hands-on activities included car designing projects, bridge-building, and the constructing of model airplanes. Due to the severe drought, students were not able to launch rockets and the model boat kits arrived too late to use. Students also learned some of the basic principles of flight and lift and conducted research on the Internet in order to find out more about careers

in transportation and energy. Participants viewed videos on topics such as the history of highways, high speed trains, principles of flight, and the impact of transportation decisions on the environment, society, and the economy. Two guest speakers, PennDOT engineers, came to the campus to talk with the participants.

During the first week, participants elected representatives and group projects were formed. The enrichment program was a very important part of the Institute. Each evening consisted of a structured program focusing on language skills or mathematics from the SAT prep manual, written by the College Board. Participants were also offered weekend recreation including trips to a local park and amusement center and sessions on physics.

RECOMMENDATIONS

- Recruit participants earlier;
- Improve outreach to the schools;
- Assess necessary funding level, based on efficient use of resources and effective programming;
- Secure private sector fund to support program activities;
- Improve interaction with the IAB;
- Prepare campus infrastructure well in advance;
- Enhance recreational activities;
- Emphasize a more "exciting" curriculum; and
- Learn from experience and evaluation feedback.

City College of NY, New York, NY

Type of Program:	Non-residential
Start Date:	July 6, 1999
Number and Year of Students:	26 High School Students
Project Director:	Dr. Neville Parker
Partners and IAB:	J. Alssid Associates, Pennsylvania--New York and New Jersey (PANY & NJ), Metropolitan Transportation Authority/New York--Connecticut, (MTA/NYCT), New York City (NYC) Board of Education, Con Edison, New York State Department of Transportation (NYSDOT), FHWA, CCNY, and Jackson and Tull, Ltd.

Since 1997, the Institute has acquired two components: an academic program and an intern program — the latter for graduates of the former. This part of a monitoring and follow-up mechanism identified the degree of stimulus conferred to the participants by their attendance in the Institute. This year's highly stimulating academic program introduced participants to:

- transportation systems
- transportation of people, goods, energy and information
- management of transportation systems
- innovations in transportation
- careers in transportation
- intermodalism
- social, economical, and environmental impacts of transportation systems
- construction engineering issues
- research, technology and its application in the transportation industry

The academic program provided a stimulating introduction to the transportation industry. Using the complex transportation network of New York City as an example, the Institute exposed the participants to a wide range of topics including:

- introduction to transportation systems
- transportation of human and freight
- transportation of information and energy
- innovations in transportation
- traffic control systems
- highway and rail construction
- aviation
- public transportation/transit planning
- social and environmental impacts
- archives and history
- ports and seaways

For each topic covered, participants were encouraged to view the topic incorporating the concepts of intermodalism, environmentalism, safety, and career opportunities.

At the end of the program, participants were asked to assess the effectiveness of the program by responding to questions related to the quality of the speakers, field trips, activities, staff, and a general category. Eleven participants responded to all questions in all categories.

RECOMMENDATIONS

- Increase challenges on student projects;
- Incorporate recreation activities on selected weekends or weekday afternoons;
- Increase number of computer terminals with Internet connections for participants;
- Schedule no more than two to three field trips or site visits per week;
- Investigate possibilities for field trips or visits to areas such as a bridge construction site;
- Motivate counselors to continue to work in the program next year;
- Develop internship opportunities for counselors with transportation providers;
- Expand active participation of sponsors or contributors;
- Expand pool of applicants;
- Contact principals and guidance counselors;
- Identify and allocate all support funds from institutions other than the FHWA earlier in the planning process; and
- Develop monitoring and tracking systems for all program graduates since the inception of the STI.

Clark Atlanta University, Atlanta, GA

Type of Program:	Non-residential
Start Date:	July 6, 1999
Number and Year of Students:	10 High School Students
Project Director:	Dr. Peter Molnar
Partners and IAB:	USWA, En Pointe Technologies, Parsons, Brinkerhoff, Quaid & Douglas, Spelman College, Georgia Institute of Technology, Georgia Department of Transportation (GDOT), FHWA Georgia Division Office, and Delta Airlines

The STI was conducted on the CAU campus for the third time. Ten students from high schools in the Atlanta metro area were introduced to the various aspects of transportation and the skills that are necessary for a successful career in the transportation industry.

The goals of the Institute are to expose secondary students to, and participate in, a series of academic experiences that are designed to motivate them toward professions in the transportation industry, and to provide them with mathematics, science and technological enrichment to enable them to consider transportation industry careers.

Topics

- Awareness of occupation and career opportunities in the transportation industry;
- Significance of the past, the importance of the present, and the future direction of transportation;
- Sources of energy and their environmental impact;
- Methods of moving people and cargo;
- Users and providers of transportation systems;
- Introduction to the many devices and methods used to manage transportation systems;
- Introduction to local, State and federal regulations as they relate to the transportation industry;
- Transportation safety;
- Awareness of the linkage of one transportation system to another;
- Importance of construction engineering issues as they relate to the transportation industry; and
- Current research, technology and its application in the transportation industry.

The academic program, which took place each morning from 9:00 a.m. to 12:30 p.m., was divided into three 60-minute periods and 15-minute breaks. Classes consisted of topics in mathematics, sciences, and computer-related topics.

The courses in mathematics and physical sciences covered basic statistical concepts, techniques and their application to transportation decision making. Topics included the descriptive aspects of statistics involving data collection, organization, and presentation. In the second part of the course, concepts from algebra, trigonometry and physics have been applied in the design of highways, bridges, etc. Topics included tension and compression, collisions, friction and curvilinear motion.

The computer course introduced participants to various software applications such as word processing, spread sheet calculation, and graphics and presentation. The skills were used during the STI for reports and presentations. The course also covered web page design with HTML, which showed the participants how to create their own home page.

In the afternoon, participants worked in small groups on their hands-on-projects. A theoretical introduction was given on each topic, and the participants learned how to use the particular software or tools. Using Geographical Information Systems (GIS) software, participants learned how to operate GIS and to access transportation-related data from the system.

Participants also learned some basic fundamentals about Intelligent Transportation Systems (ITS) and how the government is using technology to improve various transportation functions. For example, participants used the LEGO Mindstorm Construction kit, a programable computer equipped with various sensors and motor controls, to construct model vehicles. They used the vehicles to learn about the concepts of sensors and data communication between vehicles. The participants also constructed platooning vehicles to recreate the Automated Highway demonstration in San Diego, CA.

This STI concluded with a graduation ceremony where participants offered a presentation summarizing activities to representatives from the transportation authorities, the transportation industry, CAU faculty members, and their parents.

Clark Atlanta University faced the following challenges:

- Executing the sub-agreement;
- Difficulty in recruiting participants due to time constraints. Counselors at the high schools offered stipends to increase participation. Seven students who were accepted did not show up to participate;
- Finding sponsors;
- Motivating the participants for the enrichment program in mathematics and physics;
- College professors may have had difficulties in teaching the appropriate format for high school students.

RECOMMENDATIONS

- Work very closely with the high schools;
- Identify counselors for recruiting participants and follow up; and
- Hire high school teachers for the enrichment classes since they are most familiar with the participants' background and pace of learning.

Delaware State University, Dover, DE

Type of Program:	Residential
Start Date:	July 11, 1999
Number and Year of Students:	18 Middle School Students
Project Director:	Dr. Jan E. Christopher
Partners and IAB:	FHWA Delaware Division Office, Delaware Department of Transportation (DelDOT), FHWA and Delaware State University

The purpose for the 1999 DSU STI was to create awareness and stimulate interest in secondary school students to take maximum advantage of the opportunities that exist in the transportation industry.

Eighteen middle and senior high school students engaged in activities relating to:

- transportation systems
- technology
- career exposure

The program fostered continuous communications between parents, participants, and staff. The combination of a strong academic curriculum with visits by transportation professionals and extensive traveling to transportation-related sites made the 1999 Institute noteworthy in intent and effect.

The academic program exposed participants to career opportunities in the transportation industry through a series of guest speakers from DelDOT, Metropolitan Planning Organizations (MPOs), and federal agencies. The outline consisted of mathematics, the sciences, English, French as a foreign language, PSAT/SAT test preparation, and personal finance. These courses were structured to complement the transportation activities and provided knowledge that participants can utilize during the fall semester. The learning atmosphere and process encouraged participants' development as well as provided them with the necessary skills required for life-long learning experiences.

The DSU has a commitment to provide quality education for all participants and openly sought every opportunity to expand efforts to assist them. In keeping to this commitment, DSU, in conjunction with the FHWA and the DelDOT, seeks to provide educational experiences for secondary school students to enhance career awareness in the transportation industry.

The technology curriculum and projects were designed to teach and develop higher-order thinking skills through lecture as well as stimulating hands-on/minds-on transportation

technology learning activities. Participants designed and built metric 500 R&D vehicles, hot-air balloons, and balsa wood bridges.

The academic component of the transportation program included an Evening Enhancement Program. An important objective of the Evening Enhancement Program was to help improve participants' math, English, and science skills, but also to provide them with tools that will make them financially responsible. As a result, a personal finance course was implemented in the 1999 STI to teach participants how to manage their money. The personal finance enhancement focused on topics such as balancing a checkbook, understanding the mechanism of saving, credit cards, debits and credits (deposits vs. withdrawals), entrepreneurship, and how companies raise capital through issuing stocks.

Students activities consisted of practical real-life examples and projects. The Evening Enhancement Program involved projects that allowed participants to work in groups of four or five led by a teacher who functioned as both a leader and facilitator. The roles of the individuals in the group, and the group in the community, were essential for appropriate dissemination and comprehension of the material. Each group was asked to identify a product they liked, and that product served as a point of reference for financial decision making. The use of technology (i.e., Microsoft Word, Excel, and the Internet) helped to explain the value of money and how corporations raise money. Each group was given the responsibility of adopting and tracking their favorite products. Participants also gained an understanding of the stock market.

Additionally, two other evening enhancement projects, basic French and basic computer skills were also initiated. Participants were taught basic French words and expressions that became necessary on their visit to Canada, especially in Montréal. Two instructors and the director taught French to the participants at various points of the day and in formal classes in the evening. Many of the participants had already enrolled in French for the fall semester in their respective schools. Secondly, basic computer skills (Microsoft Word, Microsoft Excel, and how to send electronic mail) were taught to the participants to further their learning.

Elizabeth City State University, Elizabeth City, NC

Type of Program:	Residential
Start Date:	June 14, 1999
Number and Year of Students:	20 High School Students
Project Director:	Dr. Ellis E. Lawrence
Partners and IAB:	North Carolina Department of Transportation (NCDOT) and Elizabeth City State University

This was the first Institute of its kind to be conducted in northeastern North Carolina. The primary purpose of this Institute was to create awareness and stimulate interest in secondary school students to take full advantage of the opportunities that exist in the transportation industry.

The curriculum exposed the participants to:

- new ventures such as highway design and the transportation of people and cargo
- laws, regulations, safety, etc.
- mathematical skills that are needed to advance in the transportation industry

The Garrett A. Morgan Technology and Transportation Futures Program (GAMTTFP) package, which contained transportation career materials and other promotional paraphernalia for the participants, was a great educational teaching tool to aid in informing the participants about the history and job advancements in the transportation industry.

In addition, participants engaged in computer training, academic enhancement activities, field trips and electronic/CAD projects. Students were selected from the following counties in the northeastern region of North Carolina: Chowan, Gates, Pasquotank, Perquimans and Washington.

As the country becomes increasingly mobile, qualified personnel must have scientific and mathematical skills to function or take advantage of the technological advancements in transportation. The initial objective of this academic program was to provide a stimulating introduction to transportation careers.

Three field trips exposed participants to the careers and opportunities in the transportation industry. The trip to NASA Langley Research Center exposed students to engineering, technology, and other technical positions in aviation and transportation. The guides served as guest speakers relating NASA's mission to transportation.

The Virginia Space and Air Center further exposed the participants to careers in transportation and its importance to society. The tour guides ensured that the participants were acquainted with the present and future mathematical skills required to advance in the transportation and aviation arenas.

The field trip to the NCDOT Concrete Testing and Asphalt Testing Lab exposed participants to careers in highway construction. The guest speaker emphasized that there were various positions in highway construction that include truck drivers and engineers. Additionally, the trip stressed the fact that mathematical skills are needed through each phase of highway construction.

Additionally, the tour guide and guest speaker at the Ford Truck Assembly Plant at Norfolk, Virginia, presented the demand and supply expectation of transportation workers in the millennium. The speaker stressed the academic requirements, particularly mathematics, for workers at the technician level up to the engineering level.

The second objective of this Institute was to provide the mathematical skills needed to advance in the transportation industry. The original plan was to focus on geometry, however the pre-test revealed that the participants did not have the adequate skills needed to perform in geometry. Based on the premise that participants did not spend quality time mastering the rules of mathematics, four hours were devoted to mastering algebraic skills. Two hours were devoted to projects necessitating computer-aided design, electronics and fiber optics. These projects used formulas and math skills to reinforce the algebraic skills mastered.

In summary, the participants spent six hours per day mastering algebraic skills or six hours per day devoting the needed time to perform the task. The participants using algebraic formula calculated current, resistance, and voltage in series and parallel circuits. The participants took the theoretical knowledge and built the electronic prototype and the circuit for the "first stop light." Unknowingly, they learned to read a schematic. At the end of four weeks, the participants took an Algebra post-test. Data was collected only on the participants who took both the pre-test and post-test. On average, grades increased by 13%, while only two participants had lower scores than their pre-test. To aid in promoting an understanding of spatial sense, measurement and geometry, under the competencies required in the State of North Carolina, computer-aided design was introduced using AutoCAD as a software design package. Exams were given in electronics and computer-aided design. The need for CAD and mathematics was demonstrated on the field trips to NASA/LaRC and Ford Motor Company.

The Closing Day Session showed an enlightened group of participants who were more knowledgeable about the transportation industry and its future job opportunities. Announcements were submitted to their local newspaper editors informing the public of their participation in the Institute and to notify readers that this is one of several educational initiatives established by the USDOT and the FHWA to address the need for a diverse workforce in the 21st Century and to create an awareness of the career choices and opportunities that exist in the transportation industry.

RECOMMENDATIONS

- Allocate funding earlier in the process in order to attract and select better participants for the Institute before they are accepted into other summer programs:
- Encourage each mentor or Principal Investigator to present his or her technological equipment or software that relates to transportation in order to enhance the participants' learning by sharing via Internet, field trips, etc; and
- Ensure that the mathematical skills are promoted in the NSTI.

Florida A&M University, Tallahassee, FL

Type of Program:	Residential
Start Date:	June 13, 1999
Number and Year of Students:	20 High School Students
Project Director:	Dr. Charles Wright
Partners and IAB:	FHWA Florida Division office, Florida Department of Transportation (FLDOT), and Florida A&M University (FAMU)

The FAMU Transportation Center staff administered the university's STI. The FAMU STI and National Urban Transit Institute staff offered a range of activities that included:

- an introduction to transportation systems
- transportation of people and other cargo
- management of transportation systems
- innovations in transportation
- four-highway construction

The curriculum included an intensive overview of the areas of planning and design, construction, mass transportation (people and goods) and career choices. The daily schedule included classroom instruction in mathematics and computers, preparation for and awareness of the American College Testing (ACT) exam, and writing research papers. Information was taught through presenters, materials (videos, visual aides, and handouts), field experiences, wrap-up discussion and review of the day's activities, and hands-on projects (such as rocket design, dragster, solar paks, computer lab (*Sim City*), and bridge design).

Students were provided daily schedules as well as notebooks that they used for journaling. The collaborative efforts of the FHWA and the Florida DOT provided participants an exciting adventure in the transportation field.

In order for the participants to fully gain from the weekly experiences, each student was presented with a daily schedule and given a notebook for journal entries.

The 1999 FAMU STI was a huge success with considerable accomplishments. As with any program, there was room for improvements and modifications.

Its ongoing activities are:

- maintaining contact with former and present participants
- obtaining grades for present and past STI participants
- visiting participants in school environment
- requesting participants to be part of Ground Hog Shadow Day
- recruiting former participants for the university

RECOMMENDATIONS

- Develop STI-Advanced to provide linkage between the 10th grade and college;
- Find sponsor(s) to support transportation for local and out-of-town trips;
- Provide adequate computer space to continue mathematics (a programming language that allows participants to create a routing system); and
- Contact Kodak Educational Division to secure disposable cameras for participants to use for the visual experiences section in their notebooks.

Florida International University, Miami, FL

Type of Program:	Nonresidential
Start Date:	June 20, 1999
Number and Year of Students:	16 High School Students
Project Director:	Dr. Sylvan C. Jolibois
Partners and IAB:	Consul-Tech Engineering, Office of Congressman Alcee Hasting, Conference of Minority Transportation Officials, Florida Department of Transportation (FLDOT), FHWA Florida Division office and Post Buckley, Schuh and Jernigan

The FIU STI had the primary objective of motivating and preparing 20 high school students of primarily economically disadvantaged backgrounds for potential college or vocational studies in transportation. The Institute made a concerted effort to reach out to a broad spectrum of students encompassing various levels of academic skills and introduced them to a potentially rewarding academic experience. The participants were motivated through social and intellectual interaction with faculty, transportation professionals, and peers.

The STI focused on two main areas:

- the socio-political component of transportation; and
- the technical and scientific components of transportation systems.

Relevant transportation issues were conveyed through faculty, staff and guest speakers' lectures, workshops, seminars, field visits, and weekly field work.

Evaluation data collected on these various items showed that the staff performed well on the planned goals. Additionally, the participants agreed that the objectives outlined for the individual classes, lectures and presentations were met. The participants rated the guest speakers on items related to the clarity and effectiveness of their presentations. The participants also reported their level of enjoyment of the topics and activities presented. The results suggest that the guest speakers fulfilled their objectives excellently. Ninety-nine percent of the participants agreed that the speakers rated well on these criteria. Finally, almost 100% of the responses were very positive about the effectiveness of the field trips.

RECOMMENDATIONS

- Reconsider student selection criteria;
- Revisit residential vs. non-residential STIs. A non-residential program is recommended for the 2000 STI; however, a residential program would be a good option for future years;
- Alter transportation schedule to adjust to fewer pick-up points in order to solve some of the delay problems; and
- Implement an introductory social interactions program and develop a stricter set of rules for behavior in and out of classroom.

Howard University, Washington, D.C.

Type of Program:	Nonresidential
Start Date:	June 27, 1999
Number and Year of Students:	19 High School Students
Project Director:	Dr. Errol C. Noel
Partners and IAB:	FHWA, TransTech Academy, Cardozo Senior High, Washington Metro Area Transit Authority, District of Columbia Department of Transportation (DC DOT), and Howard University

The STI held at Howard University (HU) involved the best 10th grade high school students from the Washington, D.C. metropolitan area. The participants engaged in a number of planned activities aimed at broadening their knowledge about the diverse fields of transportation engineering, the preparation necessary for becoming a transportation professional, and sharpening their awareness of the diverse opportunities for employment in the transportation industry. The program targeted high school students in Washington, D.C., who were enrolled in a transportation program at Cardozo Senior High School. The program took advantage of rich multimodal characteristics of the Baltimore Washington metropolitan areas. Seminars were held at transportation agencies such as the FHWA, Mass Transit Administration of Maryland (MTA), Virginia Department of Transportation (VDOT), Washington Metropolitan Area Transit Authority (WMATA), Dulles International Airport, and Parsons, Brinkerhoff (a local consultant firm). The staff included a director who is an experienced transportation engineer as well as faculty, students, and staff from the University.

The Institute included:

- English
- engineering
- mathematics
- physics
- intelligent transportation systems (ITS)
- design projects
- presentations
- field trips
- educational videos
- communication
- guest speakers

The University staff coordinated Institute activities and administered grant affairs. Engineering faculty and students formulated transportation projects and activities with the assistance of the IAB. Faculty from the College of Engineering, Architecture and Computer Sciences provided seminars on careers, ethics, and experiences. Projects and field trips were led by students and faculty in the Civil, Electrical and Mechanical Engineering Departments. Professional engineers facilitated field trips and seminars at the various sites in the Washington Metropolitan area. Mathematics and physics classes were integrated with practical team projects. Speaker presentations reinforced the concepts learned during field trip experiences, which gave the participants a sense of the responsibilities of professionals in transportation careers. English classes were also integrated with project development and production of a newsletter. Special seminars were provided to assist participants with research projects using the Internet. The Office of Recruitment provided forums regarding attending colleges in general and Howard University specifically.

Evaluations were conducted to determine the effectiveness of Institute activities. Several forms of evaluations were utilized to acquire the opinions of student participants, measure the knowledge they gained, and determine whether the goals and objectives met. Pre- and post-tests were conducted as well as surveys for all the presenters and field trips. Participants prepared articles, reports, and posters about their experiences during the Institute. The 1999 STI was rated average on the overall ratings and above average in most individual categories.

The HU STI experienced challenges as a result of delayed contractual negotiations which caused delays in funding and report preparation.

RECOMMENDATIONS

- Provide greater flexibility in allowing access to funds; and
- Provide better field trip opportunities.

Jackson State University, Jackson, MS

Type of Program:	Residential
Start Date:	June 1, 1999
Number and Year of Students:	15 High School Students
Project Director:	Ms. Sheila C. Porterfield
Partners and IAB:	FHWA Mississippi Division office, Mississippi Department of Transportation (MDOT), ERGON, Inc., Jackson Urban League and Jackson State University

The purpose of the Mississippi STI was to create awareness and stimulate interest in secondary school students to take maximum advantage of the opportunities that exist in the transportation industry.

The highly stimulating program introduced participants to:

- transportation systems
- transportation of people, goods, and services
- management of transportation systems
- innovations in transportation
- careers in transportation
- intermodalism

- social, economical, and environmental impacts of transportation systems
- construction engineering issues
- research, technology, and its application in the transportation industry

The academic program was designed to provide a stimulating introduction to the transportation industry. Classroom activities introduced participants to the transportation industry and exposed them to three modes of transportation — land, water, and air. The curriculum exposed participants to in-depth facts and new frontiers such as highway design, the transportation of people and cargo, intermodalism, laws, regulations, safety, environmentalism, and career opportunities in the transportation industry.

Classroom topics included:

- introduction to transportation systems
- transportation of human and other cargos
- innovations in transportation
- highway construction
- aviation and aerospace
- public transportation
- social and environmental impacts
- transportation history and achievers
- computer-aided drafting

The academic program was strengthened as participants engaged in seminars, field trips, student projects, ACT preparation courses, and other self-development sessions.

The support program was designed to expose participants to methods and activities to assist them in the improvement of study habits and thus enhance their academic achievement. Classes were scheduled on selected afternoons. Participants engaged in leadership and professional development training. The training consisted of activities designed to further enhance and refine communication and leadership. Participants were taught how to be active and contributing team members. In addition, participants were exposed to activities and training designed to assist them in setting goals and planning for their future careers.

In the area of support services, participants were exposed to the following topics:

- leadership — youth leadership conference
- study habits

- ACT preparation
- preparing for college
- test-taking skills
- library research
- resume writing and job applications
- sex education
- diabetes education
- computer skills enhancement
- library research skills
- journal writing
- presentation skills

RECOMMENDATIONS

- Seek additional funding for the next Institute;
- Seek sponsors for the Mississippi STI; and
- Continue to refine the program.

Kentucky State University, Frankfort, KY

Type of Program:	Residential
Start Date:	June 20, 1999
Number and Year of Students:	15 High School Students
Project Director:	Mr. Ed Powe
Partners and IAB:	Kentucky Transportation Cabinet, FHWA, and Kentucky State University

The KSU, through the Office of Educational Outreach, hosted the fifth annual STI. The month-long STI drew high school students from around the Commonwealth. Since the first STI was held on the KSU campus in 1995, 106 high school students have successfully completed the Institute.

The STI, which was geared toward above-average secondary school students, promotes awareness of career opportunities that exist in the transportation industry. Participants are exposed to new frontiers and adventures in transportation such as:

- highway design
- transportation of people and cargo
- intermodalism
- laws
- regulations
- safety
- environmental issues

During the four-week period, the STI youth took approximately 12 field trips including an overnight trip to Kings Island, Cincinnati, Ohio, and a day at the Asbury College Challenge Course. The participants were given hands-on lessons in transportation in the form of walking tours, canoeing, riding in a hot-air balloon, driving go-carts, and flying a jumbo 757-jet simulator. They also designed, built, and raced dragsters as well as designed, constructed, and weight-tested bridges. All activities were educational, but fun! Other activities included going to the movies, pizza parties, swimming, mini-golf competitions, and prize bingo.

As the participants engaged in research work, computer training, and exercises to improve reading and writing skills, they were involved in a number of competitive group activities. In their groups, participants were primarily responsible for the full production of weekly newsletters and classroom presentations.

The KSU has enhanced its STI by forming partnerships with organizations and institutions that contributed financially and with in-kind support. These include the Kentucky Transportation Cabinet, Farmer's Bank and Trust Company, Toyota Motor Manufacturing, UPS, 3M, Canoe Kentucky, TRW, Kentucky Laborers Training Fund, University of Kentucky Transportation Center, FHWA, and FHWA Motor Carriers.

RECOMMENDATION

- Pay a small stipend ($100) to the participants completing the STI. This stipend will help in a small way to make up for the loss of earnings from a summer job. Several of this year's participants withdrew after enrolling because of summer employment opportunities. It would appear that this is a problem that most STI residential programs will face in the coming years.

Lac Courte Oreilles Ojibwa Community College, Hayward, WI

Type of Program:	Nonresidential
Start Date:	July 26, 1999
Number and Year of Students:	13 High School Students
Project Director:	Mr. Eric Vilhauer
Partners and IAB:	Wisconsin Department of Transportation (WisDOT), FHWA Wisconsin Division office, and Lac Courte Oreilles Ojibwa Community College

This year, all the participants in LCOOCC's 1999 STI were Native American youths from the Lac Courte Oreilles (LCO) Reservation. Because of this, LCOOCC's STI needed to address some of the cultural differences inherent in working with Indian youth in a reservation setting.

One of the more significant cultural differences between non-native and native participants is their level of willingness to relocate for job or career purposes. Efforts by the federal government earlier in this century to force Indian families to relocate off of the reservation, as a means to secure better employment opportunities and to better blend with mainstream society, had the overall effect of threatening Native Americans with cultural genocide. One of the factors that make Native Americans unique is that generally each Native American is enrolled as a tribal member with their particular tribe. The reservation on which the tribe resides is their homeland, which links each tribal member to their ancestors and traditional values and lifestyle. While few present day Native Americans in Wisconsin live a full traditional lifestyle, many of the traditional values and practices do endure and are cherished. Many of these entail staying close to and available to extended family. Thus, many present day reservation Indians tend to be understandably wary about pursuing career paths that might interfere with their practice of traditional Native American activities and values.

Because of the factors explained in the previous paragraph, as well as the fact that many of the reservation youths have had very limited exposure to the world outside of the family and reservation community, the LCOOCC's STI had many field trips. Most of these field trips explored transportation jobs that are close enough to the reservation to be feasible to commute. The Institute also sought to expose the participants to as many Native Americans working in transportation-related careers as was possible, for the purpose of establishing mentoring relationships. Our emphasis was not on exploring careers which, if pursued, would entail leaving the reservation for good. Instead, the curriculum was designed to encourage participants to explore the career possibilities that would allow them to also keep connections with their cultural roots. However, despite the above emphasis, participants were also made aware of many of the career options in transportation that exist in general throughout the United States in order to provide a more complete awareness about their career options.

The design of the Institute took into account that LCOOCC is a commuter school with no dorms or student housing facilities. The majority of the classroom experiences offered to the participants were hands-on, rather than academically oriented. These included using computer software programs to design and test bridges, construction of balsa wood model bridges, and using the Internet to explore different aspects of the transportation industry.

The academic program was designed to provide a stimulating introduction to the transportation industry. Classroom activities exposed participants to all modes of transportation, including land, water, air, and space.

Some of the specific topics covered included:

- highway and bridge design
- transportation of people and cargo
- intermodalism
- laws
- regulations
- safety
- environmentalism
- career opportunities in the transportation industry

These topics were explored in various ways, especially through video presentations. The video on the building of the bridge at Alton detailed all the aspects involved in building a major bridge today, including environmentalism and revenue sources. The video also covered actual planning, dredging, setting pilings, pouring concrete, laying decking and suspension wires, and all the other things that are needed to build bridges of that magnitude (over 1 mile!). Another video explored the state of bridges across the country, the needed repair, and the upkeep involved in our road and bridge infrastructure. There were also several videos on space and NASA. Two of them specifically targeted job opportunities for women and minorities in the space industry.

Several speakers spoke to the group. Al Bjorklund, a Bridge Engineer for the Wisconsin DOT, spoke to the participants about bridge planning, design, construction, repair and use. Mary Williams from FHWA spoke to the group about her job as a Civil Rights Program Manager, as well as other job opportunities with the FHWA. John Carroll from the WisDOT Disadvantaged Business Enterprise Program spoke about his job and other job opportunities with WisDOT. He also spoke about the planning for the expansion of a successful program in southeastern Wisconsin called TRANS (Transportation Alliance for New Solutions). This program, a collaborative effort combining the strengths of industry and labor, community-based organizations, government, and the prospective worker, offers a 120-hour industry

awareness class that prepares people for entry level positions with road construction contractors. Tom Blackstone, a truck driver for CCX, spoke about a career as a short- or long-haul truck driver. The participants were surprised by the money that he made driving trucks for short hauls and still being home every night.

Participants engaged in several hands-on activities in a laboratory setting. They gained hands-on experience in computer-aided drafting using QuickCad software. Some activities involved competitions, with the winners receiving plaques. The participants were given the opportunity to design and test various bridge designs using bridge design software. They were able to actually build model bridges using balsa wood sticks and glue, and encouraged to use the bridge design software to design the strongest bridge they could and then create a model of it. Students competed to build the lightest bridge that would still support the weight of the simulated truck that rolled across the designs. The finished bridges were stress tested by hanging weights on them until they broke. The student whose bridge supported the greatest weight before breaking also received a plaque.

Participants were also given the opportunity to design sample cities with SimCity software. They competed to develop the best city with the largest population with a budget in the black (no bonds) by the year 2050.

RECOMMENDATIONS

- Begin recruiting earlier, preferably as soon as the current Institute ends. Future recruitment can include cable TV ads, since we supply the Weather Channel to the local cable company;
- Develop a solution for housing;
- Target a more extensive area for the 2000 STI than just the schools near the reservation. Neighboring Wisconsin Tribes need to be told about the Institute, although in order for participants to attend, different avenues will need to be looked at to provide the housing necessary to run a residential program rather than a non-residential program;
- Seek out families willing to act as hosts for participants from other areas of the State and perhaps offer some reimbursement for living expenses. Prospective homes must be examined for appropriateness in order to feel comfortable placing participants in their care;
- Seek in-kind donations of lodging from area resorts, hotels, motels, or campground. This would entail having to hire additional staff as chaperones;
- Shorten the Institute to an intensified three or even two weeks and include weekend activities;
- Offer stipends to participants; and
- Target middle school students for the next STI.

Lincoln University, Chester, PA

Type of Program:	Residential
Start Date:	July 19, 1999
Number and Year of Students:	15 middle school students
Project Director:	Dr. Osayimwese
Partners and IAB:	Lincoln University, Pennsylvania Department of Transportation (PennDOT), USDOT, FHWA Pennsylvania Division office, Krapf Transportation Company and Cheyney University

The 1999 STI introduced secondary school students to transportation. The aim was to boost the quantity and quality of the transportation workforce available in the next century. The STI involved a partnership with PennDOT, Lincoln University, and private corporations. This STI was made possible by the financial and material support of members of the partnership.

Rising 8th to 10th graders, selected from Philadelphia and the City of Chester, Pennsylvania, participated in the program. The program activities consisted of 11 field visits to major transportation sites in the State, and a trip to the FAA Headquarters and the Ronald Reagan National Airport in Washington, D.C. The field visits were an integral part of the academic program. There were about 15 presentations, involving 25 guest speakers from the transportation industry and agencies. The strategy of using industry experts in classroom sessions promoted hands-on instruction and learning. This was critical for sustaining the enthusiasm of participants, especially middle school students.

The STI curriculum covered the three major modes of transportation. Each week was devoted almost exclusively to one mode. The fourth week focused on transportation technology, safety and environmental issues, and training and career opportunities in transportation. All speakers, regardless of the mode of transportation they addressed, also presented information about careers.

The participants engaged in educational and recreational activities quite successfully because the program carefully avoided making the participants feel like they were still in regular school. With considerable flexibility, the program allowed the participants to have as much recreation as possible after the long and tiring field trips.

The participants' enthusiasm increased as the program progressed. They enjoyed, among other experiences, the video production project, which they proudly showed during the closing program. The participants engaged fully in the planning and implementing of the

graduation ceremony. Attendance at the ceremony was excellent as every participant had at least one family representative to witness the occasion. Representatives from the FHWA at the national and State levels, and PennDOT and Lincoln University officials, honored the ceremony with their presence.

The participants' views about the overall program, based on the mean, median and mode responses, suggest that the majority of them strongly agreed with the positive attributes of the guest speakers, the field trips, the program activities and the staff. The participants appeared to have been most pleased with the program activities, the field trips, and the speakers as a group, in that order. This was hardly surprising because, apart from the educational value and first hand experience of the field visits, the bus rides to and from each transportation site was like a "party on wheels." The buses were air conditioned and participants had opportunities to eat their favorite fast food. The relatively low values of the mean, median and mode of the responses are consistent with the participants' implied enthusiasm about the program activities and field trips. It was also not surprising that the participants seemed to have been least excited about the staff — those who enforced the rules. For example, the Academic Aide for the program, an excellent staffer, received the lowest mark in her evaluation; written reason: she failed to take the participants to the movies after making a promise. Yet she was loved and admired by most of the participants.

The recommendations listed below are made on the premise that any program can benefit from the lessons of experience. A national program such as the NSTI is subject to variable local conditions that may not be fully taken into account in a global design.

RECOMMENDATIONS

- Begin STI earlier to increase the chances of selecting the best participants;
- Consider simplifying the evaluation forms which are too long. Participants were generally not serious about what they wrote. A shorter form might encourage more reliable responses;
- Assist with identifying the best educational enhancement games and software in order to increase the participants' desire to participate actively in the enrichment component of the STI; and
- Assist with identifying the best educational models so that participants spend more time building models of roads, bridges, ships, road vehicles, trains and flying objects rather than attending boring and uninteresting presentations.

Morgan State University, Baltimore, MD

Type of Program:	Nonresidential
Start Date:	June 21, 1999
Number and Year of Students:	27 High School Students
Project Director:	Ms. Joyce Trussell
Partners and IAB:	Baltimore City Public Schools, Maryland Department of Transportation (MDOT), FHWA Maryland Division office, National Highway Traffic and Safety Administration, the Office of congressman Elijah Cunningham and Morgan State University

The committee will reconvene in October to plan for the 2000 STI.

The preparation for the 1999 STI started in early February with a series of meetings by the committee members. Following suggestions made last year on recruitment, this year recruitment started early. Preliminary visits and schedules were established under the supervision of Professor Norbert Zucker and Mr. Marcus Alford prior to their departure from MSU.

Several members of the committee visited schools and spoke to students and counselors. They disseminated information by means of brochures, posters with detachable "information request" cards, applications and the STI guidelines. This drew a response of 90 inquiries. In addition, program information and a downloadable application were made available on the National Transportation Center website.

The Institute received a total of 38 applicants. Under the stipulation to admit only 30 students, the committee members went through a rigorous process selecting the final participants. The committee selected 29 students, two of whom withdrew before the start of the STI.

The Institute was held on campus during the regular summer school session with 27 participants from the Baltimore City, Baltimore County, and Harford County school districts. The Institute introduced participants to:

- transportation systems
- transportation of people and cargo
- management of transportation systems
- innovations in transportation
- careers in transportation

- intermodalism
- social, economic, and environmental impacts of transportation systems
- transportation safety
- research technology and its application in the transportation industry
- logistical systems

The STI is a critical and systematic educational endeavor to explore aspects of the transportation industry and its role in our society.

Under the guidance of Mr. William Lowe, Editor, MSU National Transportation Center, participants wrote, edited, and designed the first edition of the *STI Outreach* newsletter. The participants also created a theme for the 1999 STI, "We Are Taking a Journey to a New Destination" that was printed on t-shirts and calculator covers. The participants engaged in numerous transportation-related activities. They built cars with materials from a Challenge Pak and participated in a bridge building project that involved experimenting with various bridge designs. This was done under the supervision of Mr. Carl Highsmith, FHWA. For his innovative bridge design, Jason Brown was the recipient of the Bridge Design Recognition Award.

Thanks to the dedication of the staff, the participants maintained a high-level of discipline and good conduct throughout the program. Participants were always on time and ready for their daily activities. The enthusiasm of the STI participants was perhaps best exhibited when they responded to invitations to unscheduled STI events. Four participants chose to attend a U.S. Coast Guard function, the Commissioning Ceremony of the Coast Guard Cutter *Alex Haley* on Saturday, July 10, 1999, in Curtis Bay, Maryland. These participants had the opportunity to greet the U.S. Secretary of Transportation, Rodney E. Slater, who was the keynote speaker.

Two weeks after the conclusion of the Institute, more than half the class voluntarily attended another transportation-related field trip. A representative from the National Highway Traffic Safety Administration (NHTSA) invited STI participants to tour the Federal Aviation Administration (FAA) and the Ronald Reagan National Airport along with STI participants from Pennsylvania. The tour was a combined effort of FAA/FHWA/NHTSA. On Thursday, July 28, 1999, eighteen 1999 STI participants and three 1998 STI participants had the opportunity to talk with several pilots and air traffic controllers. They were permitted to tour the radar control room and the air traffic control tower. The seminar was very informative and included information on salary ranges and educational requirements.

Everyone who interacted with the STI, especially parents/guardians and high school counselors, deemed the program to be a success. The participants thoroughly enjoyed the site visits, the seminars, presentations, and the hands-on activities. With an effort to make

this a well-rounded experience, participants were encouraged to enhance their problem solving and thinking skills by learning the importance of communication and teamwork. The self-esteem seminar served as a great beginning and an excellent motivator.

One week prior to the beginning of the Institute, about 60 parents and students attended a mandatory orientation. The Institute had 27 successful committed participants upon commencement of the STI.

Participants and parents requested that the Institute be lengthened and participants be permitted to return for a consecutive year. Participants also volunteered to return in the year 2000 to speak at orientation.

RECOMMENDATIONS

- Administer a transportation pre- and post-test;
- Include the U.S. Coast Guard in the program;
- Include more hands-on activities;
- Increase the number of classroom assignments;
- Have participants complete and submit class assignments;
- Test participants on what they have learned in addition to writing in their journals for evaluation purposes. Grades will not be a factor;
- Invite representatives from various Human Resources Offices to speak to participants regarding salary and educational requirements.
- Early planning for recruitment;
- Present STI information to parents;
- Present information at Parents and Teachers Association meetings and advertise in high school newsletters;
- Attend the Morgan State University annual career day in October;
- Invite high school counselors for an STI presentation and attend the high school counselors' annual meeting;
- Limit recruitment for 2000 STI to Baltimore City and immediate surrounding counties; and
- Continue to seek sponsors.

North Carolina A&T State University, Greensboro, NC

Type of Program:	Residential
Start Date:	July 5, 1999
Number and Year of Students:	13 High School Students
Project Director:	Ms. Joyce Johnson
Partners and IAB:	North Carolina Division FHWA, North Carolina Department of Transportation (NCDOT), The Joseph E. Seagram Company, North Carolina A&T State University, and the Greensboro Transit Authority

This STI is a unique concept that creates an awareness of the attractive career choices and opportunities existing within the transportation industry. Analysts predict that by the 21st century, the transportation industry will experience a shortage in qualified professionals. As a result, the USDOT, FHWA, State and local transportation agencies, and the University's Transportation Institute have placed a priority on the recruitment of the "best and brightest" young people to form the nucleus of the transportation workforce for the next century. As this country and the entire world become increasingly mobile and interactive, highly trained and broad-minded young professionals become essential. The Institute was developed to help respond to that anticipated human resource need. Specifically, the Institute strives to provide high school students with:

- basic information on the significance of the transportation industry;
- awareness of career opportunities in public and private sectors of transportation;
- exposure to all spheres of transportation, including passenger automobiles, buses, vans, trains, ships, and planes, as well as freight carrier trucking, rail, shipping, airlines, and pipelines;
- understanding of business and engineering options available in transportation; and
- education at the university level.

The Institute provides high school students with opportunities to interact with transportation professionals, and to discuss theory and practice in a classroom setting. It fosters diversity in educational and career opportunities in transportation by providing participants with skills that will enable them to make knowledgeable decisions concerning transportation as a major.

Additionally, each participant received a weekly stipend and a tuition-free college-level English course. Credit from this course can be "banked" toward future enrollment at NCA&T as a transportation management or transportation engineering major. This course credit is also

transferable to other universities. Upon successful completion of the STI, participants are awarded certificates acknowledging their participation and achievement.

The STI relies heavily on area high school guidance counselors, teachers and former students to recruit eligible participants. Counselors and teachers at schools in a four-county area in North Carolina (Alamance, Forsyth, Guilford, and Rockingham) were contacted by mail, phone, and word-of-mouth early in the spring semester to inform students about the Institute, providing a viable option for summer plans. Area churches and community groups were also contacted in an effort to gain access to an even greater pool of applicants. Since the Institute is a non-residential program, a prerequisite for acceptance is the ability to commute on a daily basis.

Participants were selected based on their academic achievement, expression of interest in the field of transportation, and written recommendations from high school counselors and instructors. Additionally, in instances where participants did not demonstrate exceptional academic performance, special consideration was given to those who displayed noteworthy potential in other areas (i.e., maturity, well-developed character and integrity, etc.) in an effort to provide an outstanding learning experience to a more diverse group of young people.

Thirteen distinguished high school students (six rising seniors and seven rising juniors) were accepted and agreed to participate in the STI. The group was comprised of students (six males and seven females) with an average GPA of 3.0 on a 4.0 scale.

Evaluations were administered after each scheduled session, guest presenter, site visit and recreational activity. These evaluations allowed participants to state what adjustments needed to be made during the present program and provided insight into future planning. In addition to written evaluations, weekly roundtable discussions were held to give the participants an open forum to voice their opinions. These sessions were especially informative.

The Transportation Institute at NCA&T has served as a host site for the STI for the past seven years. It has provided the participants the opportunity to experience campus life as well as enable them to utilize resources and technology at the university level. This host site also allows the ease of collaboration between various departments on campus that help provide a diverse curriculum for the STI program. NCA&T serves as an excellent site for the STI and there are no host site recommendations.

The NSTI Resource Center has played a vital role in the success of the Institute, however, the following recommendations may enhance this function.

RECOMMENDATIONS

- Hold the Training Workshop for host sites earlier in the year (January or February). April is too close to the beginning date for many programs.

- The information within the administrative manual should be received earlier to ensure proper management of the program.
- Issue reimbursements on a timely basis. The Training Workshop was held during the month of April; however, reimbursement of expenses incurred for this trip were not received until August. This delay caused a tremendous hardship.
- Clarify form NRC-424, a definite required submission date should be specified clearly.

Northwest Indian College, Bellingham, WA

Type of Program:	Residential/Non-Residential
Start Date:	June 28, 1999
Number and Year of Students:	23 High School Students
Project Director:	Dr. Glen Bledsoe
Partners and IAB:	FHWA Washington Division Office, Washington Department of Transportation (WDOT), and Northwest Indian College

The STI was conducted in two phases: the first, a control group in a non-residential program integrated into NWIC's Seaquest program, which was held on the main campus near Bellingham, Washington; the second, a residential program on the Makah Reservation near Neah Bay, Washington.

Participants were from high schools in Washington, Oregon, Idaho, and Montana and were primarily from tribal areas supported by Northwest Indian College. These include Makah, Quilleute, Hoh, Quinault, Nooksak, Lummi, Swinomish, Blackfeet, and Flathead tribes. All but one participant was a member of a Native American Tribe.

The academic program consisted of courses in Communication and English, Language Arts, Mathematics, Geology, Biology, and an Introduction to Computers. A typical day consisted of formal educational programs taught by certified high school teachers via the satellite distance learning system from the main campus. Fridays were reserved for full day field trips and weekends were spent performing physical education, cultural, and studying activities.

In addition to regularly scheduled courses, participants were lectured on:

- the four modes of transportation
- history
- physical education

- cultural activities
- bridge design and construction

Hands-on activities involved teams and bridge construction. Teams were formed to construct a bridge of any type using manila file folds and masking or scotch tape. The bridges had to have a clearance of 2 inches, a clear span of 12 inches, and a width of 3 inches. Bridges were destructively tested by loading with weights until failure. Only two bridges exceeded the maximum test weight without failure.

All field trips taken were beneficial to the participants and were embraced by the staff as well. They included trips to the USCG Station Neah Bay and the USCG Station Aviation Group, Port Angeles. Participants were observers in several air and sea rescue drills. Federal Express provided a pilot, aircraft, and dispatch staff members who presented a class on worldwide express courier systems and a Cessna Caravan turbo-prop aircraft. The Wright Brother's, Aviation of Port Angeles, Washington, provided a tour of their Fixed Base Operation and presented a seminar on careers in aviation. Fishermen and tribal members at Neah Bay instructed the participants in salmon and tuna trolling, crabbing, and gill netting. The participants also visited two rapid response vessels that were equipped to react to oil spills from the numerous oil tankers entering Puget Sound via straits adjacent to Neah Bay. In addition, field trips were taken to Sol Duc Hot Springs and Olympic National Park.

Overall, the STI was successful. As with any program, there is room for improvement.

South Carolina State University, Orangeburg, SC

Type of Program:	Residential
Start Date:	June 21, 1999
Number and Year of Students:	40 High School Students
Project Director:	Dr. Joseph Beier
Partners and IAB:	South Carolina Department of Transportation (SCDOT), FHWA SC Division office, South Carolina State University

The purpose of the STI held on the campus of SCSU is to create awareness and stimulate interest in careers in the transportation industry by secondary school students.

The 1999 STI was very successful. The Institute awarded 40 scholarships to high school students from across the State of South Carolina. The Urban League of the Upstate continued

its partnership with the STI and provided $24,000 to assist with the project. Twenty students were selected from the upstate region of South Carolina and twenty from the remainder of the State.

The Institute offered a range of activities that exposed the participants to transportation modes of land, water and air. This year the SC Port Authority, the Columbia Metropolitan Airport, SC Public Transportation Providers, SC Public Safety, SC State Museum, SC Parks, Recreation and Tourism, National Aeronautical Space Administration (NASA) and the SCDOT were among the active participants. The SCDOT continues to make strong contributions to the success of the Institute; providing speakers, field trips, and activities to support the STI.

Classroom projects were designed to enhance problem-solving skills. Self-esteem was improved by the successful completion of all activities. Speakers described their jobs and career opportunities in the transportation industry. Field trips emphasized intermodalism as well as career opportunities.

The evening sports and recreation program promoted good sportsmanship and encouraged everyone to participate. Part two of the evening program was the computer skills enhancement. A technician assisted the instructor in meeting the goals and objectives of the Institute.

The STI participants registered high ratings for speakers, activities, field trips and staff. Composite mean, mode and median ratings for subscale items measuring their qualitative observations of speakers, activities, field trips, and staff, indicate substantially favorable impressions by participants who responded to the survey.

At the conclusion of the Institute, a closing ceremony was held. Guest speakers from various agencies within the USDOT in Washington, D.C. were in attendance. Plaques and certificates were presented to participants and various agencies that supported the Institute.

RECOMMENDATIONS

- Secure outside funding sources;
- Decrease the enrollment of students;
- Distribute stipends to the Urban League participants at the end of the four-week Institute, instead of each week, in order to eliminate the queries from the other STI participants: and
- Conduct follow-up studies.

Southern University and A&M College, Baton Rouge, LA

Type of Program:	Nonresidential
Start Date:	July 6, 1999
Number and Year of Students:	24 High School Students
Project Director:	Dr. Patrick Carriere
Partners and IAB:	Louisiana Transportation Research, FHWA Louisiana Division office, Louisiana Department of Transportation (LADOT), Exxon, ABMA Engineers, and Southern University and A&M College

The STI provides orientation to engineering and technology programs and creates an awareness of the opportunities in the transportation industry. The Intermodal Surface Transportation Efficiency Act (ISTEA) created opportunities to change the nature of transportation in America. There has never been a greater opportunity to improve our communities and move our transportation system in a positive direction. An IAB assisted with planning and developing the Institute. The IAB consists of representatives from the LADOT, FHWA, and Southern University.

The IAB was established to offer vast levels of expertise in the fields of transportation engineering. The IAB assisted the director in providing the optimal experience for the summer participants. The staff received excellent suggestions on innovative techniques, field trips, current research, and professional contacts. Additionally, the IAB provided recommendations on the application process and selection, field trips, guest speakers, and curriculum.

The 1999 STI was very successful. The participants made tremendous improvements in their research and computer skills, ACT test-taking skills, and overall awareness of opportunities that exist in the transportation industry. The four-week Institute at Southern awarded 24 scholarships to 9th and 10th grade students from the five Parish metropolitan Baton Rouge area.

The participants were given a pre- and post-test. Final results showed that participants improved two standard scores in English and mathematics, four standard scores in reading, and remained constant in science reasoning. Overall, composite scores increased on an average of two points. The participants showed great enthusiasm while learning techniques and strategies in courses they had not yet taken.

The Institute offered a wide range of activities that exposed the participants to transportation modes of land, water and air. They visited the Baton Rouge Port Authority, Baton Rouge Metropolitan Airport, Bayou Chicot Dam, ALF Testing, ABMB Engineers, and LADOT

Materials and Testing Laboratory. The LADOT and LTRC made exceptionally strong contributions to the success of the Institute by providing speakers, field trips, transportation, drivers, and other resources to support the STI.

Invited speakers have excited, informed, and encouraged participants to explore the fields of transportation. Most of the speakers brought visual aids, tools of the trade, and souvenirs to capture the participants' attention. Some of the speakers were:

- Mr. Anthony Culp, DOT, Aviation Director
- Mr. David Grouchy, DOT, Construction Engineer
- Mr. Huey Dugas, Chief Planning, Intelligent Transport System
- Mike Aghayan, DOT, Engineer Program Manager
- Mr. Seve Serna, FHWA, Safety Engineer
- Mr. Jim Champagne, Executive Director of Louisiana Highway Safety Commission

The instructors provided activities to promote critical thinking and emphasized various techniques that afforded participants the opportunity and skills needed to solve problems.

Each Friday, the participants were transported to area sites important to the modes of transportation discussed that week. Usually, the field trip encompassed the entire day with experts giving explanations on techniques, equipment, and future research and projects. The field trips were:

- ALF Testing Lab;
- Louisiana Transportation Research Center;
- Baton Rouge Port Authority;
- Federal Aviation Association Control Traffic Tower;
- I-10/I-12 expansion project;
- Department of Transportation, Development Materials Testing Lab;
- Bayou Chicot Dam; and
- ABMB Engineers, Inc.

Every week the participants had to research the history, safety measures, and innovative trends of popular means of transportation in the mode studied. The research was then formulated into a research paper to be collected by the STI staff. Projects such as building planes, rockets, and bridges supplemented the research. These projects, which gave participants an initial opportunity to do research using the library and the internet, were presented to the parents during the closing program. Supplemental activities included

construction of projectile rockets; innovative bridge construction; and a computer lab where each student was asked to investigate a mode of transportation and prepare a Microsoft PowerPoint presentation for the closing program.

RECOMMENDATIONS

- Identify and allocate funds for the 2000 STI by January 2000;
- Increase the level of FHWA funding; and
- Seek additional sponsors for the Institute.

Tennessee State University, Nashville, TN

Type of Program:	Residential
Start Date:	June 6, 1999
Number and Year of Students:	25 High School Students
Project Director:	Dr. Decatur B. Rogers
Partners and IAB:	Tennessee Department of Transportation (TDOT), US Army Corp of Engineers, FHWA, and Metropolitan Nashville Airport Authority

The 1999 STI was the fourth residential Institute held at the TSU campus, and was sponsored by The College of Engineering and Technology, in partnership with the Metropolitan Nashville Airport Authority, the FHWA, the TDOT, the United States Corps of Engineers, and SCSU.

The purpose of the 1999 STI was to create awareness and stimulate interest in secondary school students to prepare academically to take maximum advantage of career opportunities that exist in the transportation industry.

The 1999 STI was held during the regular summer school session, June 6 -July 3, 1999, with 9th and 10th grade students from eight cities across the State of Tennessee. Of the twenty-five participants in attendance, 48% were female and 52% were male. The 1999 STI introduced participants to:

- transportation systems
- transportation of people and cargo

- management of transportation systems
- innovations in transportation
- careers in transportation
- intermodalism
- social, economical, energy, and environmental impacts of transportation systems
- construction of engineering
- transportation safety

Participants attended regularly scheduled classes on transportation issues, algebra, and computer science. In addition to the regularly scheduled classes, participants took transportation laboratory courses, viewed transportation videos and attended daily seminars conducted by transportation professionals. Seminar speakers addressed a wide range of transportation issues including career opportunities in transportation and the necessary educational background needed to access transportation careers. Weekly transportation-related field trips reinforced their learning experience.

The Metropolitan Nashville Airport, FHWA, U.S. Corps of Engineers, and TDOT working through the University's IAB provided excellent support for the Institute. The Board provided daily seminar speakers and planned weekly field trips to transportation businesses and industries.

The Institute provided awareness and stimulated interest in the transportation profession. The successful 1999 STI concluded with an awards luncheon with FHWA Division Administrator, Mr. Chuck Boyd, as the keynote speaker.

RECOMMENDATIONS

- Begin the recruitment process in January and conclude in April; and
- Improve interaction between pre-college programs.

Texas A&M Research Foundation, College Station, TX
Texas Southern University, Houston, TX
Paul Quinn College, Dallas, TX

Type of Program:	Nonresidential
Start Date:	July 5, 1999
Number and Year of Students:	35 High School Students
Project Director:	Dr. Naomi Lede
Partners and IAB:	Southwest UTC, Dallas Area Rapid Transit, Houston–Galveston Area Council, Texas Southern University, Texas Department of Transportation (TDOT), USDOT, Paul Quinn College, FHWA, North Central Texas Council of Governments, and the Texas Transportation Institute (TTI)

The TTI, as part of the Texas A&M University System, served as the lead agency for the 1999 STI, whose partners were Texas Southern University and Paul Quinn College. This organization of the STI was beneficial because it provided the opportunity to expose secondary students to a diverse group of transportation educators and professionals working in various modes of transport, it maximized expertise and available resources to adequately meet the goals of the STI, and it eliminated a duplication of effort. Staff from TTI assumed the role of Institute Director and Program Coordinator. The 1999 STI emphasized both the quality and quantity of participants selecting transportation careers.

The STI was designed to create an educational and training delivery system that:

- attracts secondary school students and enhances their interests in careers in transportation
- improves math, science, and technology skills
- strengthens the links between the transportation sector and public private institutions through creative partnerships

The STI specifically focused on creating high interest among secondary school students and creating opportunities and activities that enhanced awareness and knowledge about transportation careers.

A total of 35 high school students attended the two, 2-week, non-residential Institutes held from July 5–16 on the Texas Southern University campus in Houston, Texas, and from July 19–30 on the Paul Quinn College campus in Dallas, Texas. The two-week Institutes addressed the three modes of transportation (air, land, and water) and provided the

participants with educational field trips to transportation facilities in Houston and Dallas, on-site seminars, lectures by transportation professionals, hands-on technical activities, and networking with leaders in the transportation industry from around the country. Based on participants' feedback, the Institutes were deemed to be the appropriate length and the activities were fun and educational. In the future, the STI plans to seek additional financial support from the FHWA in order to help offset the significant cost sharing incurred.

The project team developed two separate but similar Institutes for the 1999 STI. The Houston STI participants spent two weeks on the campus of Texas Southern University, and Dallas STI participants spent two weeks on the campus of Paul Quinn College. During these Institutes, participants received:

- Exposure and training through a core curriculum designed to introduce them to the transportation industry and its various modes;
- An introduction to a series of academic and practical experiences designed to motivate and encourage them to pursue transportation careers;
- Training and exposure to science, mathematics, and technological enrichment through planned educational activities;
- Educational field trips and on-site seminars to introduce various transportation services and modes; and
- An opportunity to participate in leadership and other professional activities to introduce them to university life and higher educational requirements.

Houston STI

The Houston STI took place July 5–9 and July 12–16, 1999 on the campus of Texas Southern University. This non-residential Institute had a diverse schedule which incorporated a combination of lectures, hands-on exercises, and facility tours and activities.

The Houston STI participants were exposed to the diverse and multi-modal transportation facilities in and around the Houston–Galveston area. Field trips included operations at Houston METRO, the Port of Houston, the Port of Galveston, the Center for Ports & Waterways at Texas A&M University – Galveston, Houston Transtar, and George Bush Intercontinental Airport. Participants also gained exposure to research facilities on the Texas A&M University campus in College Station, Texas.

Houston STI participants also shared in activities that emphasized the need for technical skills in the transportation profession. These activities included air transportation exercises, traffic signal design and timing exercises, and daily journal entries recording the activities and observations about what they learned. Based on the diversity of the Houston academic program, including the attention to air, land, and water transportation, and the skills needed to pursue careers in these fields, the objectives of the program were met.

According to the feedback from the Houston STI attendees, the Institute was the appropriate length. The participants also indicated that the number of field trips and activities were appropriate. However, approximately half of the participants thought that they listened to too many speakers and that the days were too long. They also confirmed that the Institute included field trips to all transportation modes and agreed that the STI was fun, educational, and that they would like to return, if the STI is offered again.

Dallas STI

The Dallas STI took place July 19–23 and July 26–30, 1999 on the campus of Paul Quinn College. As with the Houston STI, this non-residential Institute had a diverse schedule which incorporated a combination of lectures, hands-on exercises, facility tours and activities.

The Dallas STI participants were exposed to the diverse and multi-modal transportation facilities in and around the Dallas area. These activities included, but were not limited to, operations at Dallas Area Rapid Transit, Burlington–Northern Santa Fe Railroad, Dallas–Fort Worth International Airport, the U.S. Army Corps of Engineers, and Southwest Airlines.

Dallas students also participated in activities that emphasized the need for technical skills in the transportation profession. These activities included air transportation exercises, traffic signal design, and timing exercises. The Dallas participants also put their journal observations on the Paul Quinn College Internet site and conducted on-line research for technical papers on the three modes of transportation. A high-ranking speaker was Ms. Gloria Jeff, Deputy Administrator, FHWA. Based on the diversity of the Dallas STI academic program and the emphasis on the skills needed to pursue careers in these fields, the objectives of the program were met.

AREAS FOR IMPROVEMENT

The STI could make improvements to the program components to ensure the smooth operation of the Institutes. NRC should begin communications with the host sites earlier in the process. Earlier communication would enable sites to recruit participants before the end of the school year and allow staff sufficient time to make travel arrangements.

Additionally, it took nearly three months to receive travel expense reimbursements from the NRC. Although the NRC preferred communication through e-mail, the STI's queries and concerns were not addressed in an expeditious manner. These are just two examples of the organizational and communication problems experienced by the STI staff in working with the NRC. These issues must be resolved in order to facilitate the execution of STI contracts by host institutions.

Finally, the allocated budget for the Institute was insufficient and should be increased. As indicated by the cost sharing incurred by the partners, the true cost of hosting the STI was approximately three times that of the funding allocated by the NRC. While a certain

amount of cost sharing is expected for such a project, limited resources create a hardship for institutions to host a high-quality STI, especially for smaller institutions with fewer resources and contacts on which to rely for such cost sharing. Adequate funding will ensure high-quality STIs across the country and reinforce the importance of professional development to the future of the transportation profession.

To foster comprehensive approaches and build effective coalitions that address transportation educational and career opportunities for the next century, the STI should support the establishment of comprehensive regional centers within each State. Such a coalition of colleges, universities, school districts, businesses, industries, and other organizations can contribute to a more broad-based recruitment program for transportation education, career development, and advancement. Moreover, given the growing diversity of the population and the limited engineering and transportation programs in Historically Black Colleges and Universities, every effort must be made to form a basis for balancing educational access and career development opportunities by forming partnerships with other public and private institutions. Such partnerships can strengthen the STI and ensure its ultimate success.

Tuskegee University, Tuskegee, AL

Type of Program:	Residential
Start Date:	June 21, 1999
Number and Year of Students:	20 High School Students
Project Director:	Unavailable
Partners and IAB:	Unavailable

Tuskegee University has executed the STI in support of its unswerving commitment to its one hundred year-old mission statement:

> *"To develop leadership, knowledge, and service for a global society as well as the regional and campus community, and beyond through the development of outreach programs that are compatible with the University's educational mission, that improve community problems, and help develop relevant solutions."*

Tuskegee University, in conjunction with the FHWA Alabama Division office and the Alabama Department of Transportation (ALDOT), has forged an alliance to address the need for exposure and technical competency in rising 10th grade students throughout the State of

Alabama. The STI provided educational experiences that will lead to the enhancement of career opportunities in the transportation industry. The STI is comprised of three components: classroom, evening enrichment activities, and recreational/weekend activities.

The IAB was integral to the overall success of the Institute. They reviewed the guest speakers and interfaced with various government agencies to ensure access to and reinforcement of the learning objectives involved in each week's lesson plan. They also provided assistance in planning field trips and assisted in securing funding.

The STI was designed to expose secondary students to career opportunities in the transportation industry. Through exposure, an interest in the industry and the development of potential future qualified transportation employees and entrepreneurs were initiated.

The STI objectives are to expose secondary students to professions in the transportation industry through lectures, an academic curriculum, and hands-on projects to reinforce learning objectives. Long-term measures were put in place as an element in assessing these objectives. The Institute also provided enrichment opportunities in computer technology and science.

The academic program provided participants with an overview of all modes of transportation — land, air, and water transportation. To reinforce learning objectives, participants engaged in field trips to Hartsfield International Airport, ALDOT, Mobile River Tunnel, and the Gulf of Mexico.

The evening enrichment offered challenging opportunities in life skills and computer use. On Monday, Wednesday, and Friday of each week, participants met with Mr. Mark Freeman from 6:30 p.m. to 8:30 p.m. in a computer lab on campus. The course was geared toward research on people and projects of note in the transportation industry and focused on what participants were learning in other aspects of the Institute. Using Microsoft PowerPoint, all participants introduced themselves and their interests, experiences, and research highlights from internet searches. During the culminating ceremony, participants made final presentations.

RECOMMENDATIONS

- Develop additional partners such as the Tuskegee Municipal Airport and Museum;
- Provide local plane rides through the National Black Pilots Association;
- Plan more field trips; and
- Continue sharing plan with the Alabama A&M host site.

University of Arkansas at Pine Bluff, Pine Bluff, AR

Type of Program:	Residential
Start Date:	June 21, 1999
Number and Year of Students:	15 High School Students
Project Director:	Ms. Felicia Williams
Partners and IAB:	FHWA Arkansas Division office, Arkansas Highway and Transportation Department, and the University of Arkansas Pine Bluff

The purpose of the STI is to create awareness and stimulate interest in secondary school students to take maximum advantage of the opportunities that exist in the transportation industry. The UAPB has a continuing commitment to provide education for all participants and openly seeks every opportunity to expand efforts to assist them. In conjunction with the mission of UAPB, SCSU, FHWA and the Arkansas Department of Transportation (ARDOT), the objective of the Institute is to provide educational experiences for secondary school students that enhance career awareness in the transportation industry.

The highly stimulating program introduced participants to:

- transportation systems
- transportation of human and other cargo
- management of transportation systems
- innovations in transportation
- careers in transportation
- intermodalism
- social, economical and environmental impacts of transportation systems
- construction engineering issues
- research, technology and its application in the transportation industry

Participants completed weekly evaluations about programs and faculty each week. The faculty and Project Director met each week to evaluate course content, student projects, laboratory experiences and unit objectives.

University of Missouri–Rolla, Rolla, MO

Type of Program:	Residential
Start Date:	June 21, 1999
Number and Year of Students:	18 High School Students
Project Director:	Unavailable
Partners and IAB:	Unavailable

The Transportation Institute in the Department of Civil Engineering at the University of Missouri–Rolla hosted its first STI. The objectives of the STI are to:

- expose secondary school students to transportation careers and allow them to participate in a series of academic and practical experiences designed to motivate them toward professions in the transportation industry
- provide mathematics, science and technological enrichment to enable them to pursue a career in the transportation industry

With our team's unique strengths, the objectives of this effort were to provide an educational experience for 9th and 10th grade high school students to explore a wide spectrum of the transportation industry and its role in our society. To that end, the STI curriculum provided educational opportunities for its participants in critical areas of transportation, mathematics and science, and computers. The participants were exposed to university life, leadership and team building activities. Although given the extremely short time available for implementing this year's STI, no formal measures were developed to assess outcomes; several informal measures indicate the program's success in meeting the outcomes described below. Measures include student newsletter articles, homework submitted, and in-class questions.

The FHWA's funds were used as "seed" money for the Institute, which cost approximately three times the amount funded. The four-week Institute was conducted by faculty, staff and students from the Department of Civil Engineering. Government agencies and private firms provided substantial support in funding, staff assistance, and educational materials as well.

Given the late start for this year's STI, only youths in the St. Louis area were recruited. The National Society of Black Engineers (NSBE) and local MODOT personnel helped to identify and recruit candidates. These candidates were contacted via telephone, email and US mail and were invited to apply. Fifty application packages were distributed through high school counselors, church groups, the NSBE and Ms. Julia Davis at the St. Louis Public Library. Twenty-two applications were received and twenty were accepted. Selection was based on academic standing, recommendations from high school counselors and teachers,

and their essays explaining interest in transportation. The Project Director and Project Coordinator assessed the applications and accepted 18 of the 22 submitted. The average grade point average of the chosen group was in excess of 3.0 on a 4.0 scale. Half were 9th graders and half were 10th graders ranging in age from 13 to 15 years. Two participants were unable to attend given lack of funds and two were expelled due to behavior problems during the third week, leaving 16 to complete the Institute.

The NSBE members felt very strongly that the STI participants should meet African-American engineers and engineering students. During a NSBE-sponsored cookout at The Cornerstone Partnership in St. Louis, STI participants were introduced to African–American engineers and engineering students.

Virginia State University, Petersburg, VA

Type of Program:	Residential
Start Date:	June 21, 1999
Number and Year of Students:	28 High School Students
Project Director:	Dr. Ali Ansari
Partners and IAB:	Matocca High School, FHWA Virginia Division office, Virginia Department of Transportation (VDOT), and Virginia State University

The STI was composed of five field trips, hands-on projects, engineering principals, computer, and oral and written communication skills sessions.

The FHWA, through SCSU, provided $35,000 as well as guest speakers. The VDOT arranged speakers, sponsored field trips, and provided some lab supplies. They also provided two instructors: Mr. F. Jones to conduct oral and written communication skills; and Ms. J. Wilson to conduct computer-aided presentation sessions. The Virginia Department of Aviation contributed training, and Virginia Road and Transportation Builders Association each contributed $1,000 toward the STI funding.

The Institute offered a range of activities that exposed the participants to:

- transportation systems
- urban transportation
- computer-aided design
- solar energy

- highway construction
- environmental regulations

Participants engaged in SAT prep and mathematics courses, seminars, field trips, and hands-on projects. They were also involved in various evening activities, including recreational periods, leadership seminars, and cultural field trips.

West Virginia State College, Institute, WV

Type of Program:	Residential
Start Date:	June 20, 1999
Number and Year of Students:	18 High School Students
Project Director:	Dr. Robert Harris
Partners and IAB:	Federal Railroad Administration, WV Department of Education, FHWA West Virginia Division office, Appraisal Associates, West Virginia Department of Transportation (WVDOT), and West Virginia State College

A diverse group of students (7 males and 11 females) participated in the Institute designed to create awareness and stimulate interest in the transportation industry as a career option. The Institute began with an orientation session and a welcome banquet for the participants and their parents. The initial classes in the Institute gave an overview of the transportation industry including the organization of the USDOT and the diversity of career opportunities. The STI initially captured the interest of the participants with discussions and videos of innovative road projects and high-tech building materials, so that they would use this as a reference point throughout the Institute.

An effort was made to include as many transportation-related activities as possible, including activities related to the major modes of transportation. Academic activities began, on most days, at 8:30 a.m. Learning was reinforced through lectures, videos and problem-solving activities whenever possible. Active participation was a part of the program, and, as such, the instructors engaged the participants as much as possible.

Activities in our Institute included the following: eight career speakers, classroom lectures on ecology, economics, science, history, metrics, physics and civil rights; hands-on activities based on transportation issues; seven transportation-related field-trips to about 20 different sites; and several problem-solving group activities.

In developing the curriculum, it was important to deal with issues at the forefront of West Virginia society, namely the need for improved transportation to support economic development and the necessity of protecting our abundant natural resources. At the center of our program was what came to be known as the four "E's": Engineering, Economics, Environment, and Ethics.

West Virginia is largely a rural State that is in need of an improved infrastructure to support economic development. At the heart of any proposed expansion in the transportation system is the need to protect the State's abundant and diverse natural resources. STI curriculum focused on:

- ecology and economics as they relate to various modes of transportation
- physics
- West Virginia history
- civil rights

The STI staff felt that instruction in these topics was necessary for the participants to benefit fully from the practical experiences of the Institute.

While education in basic sciences and economics was a large and important component of West Virginia's Institute, transportation was a priority. The STI staff altered the schedule, as needed, to accommodate any activity that was directly related to transportation. Participants were expected to keep a journal that chronicled their experiences especially as they related to transportation. During field trips, for example, participants were asked to describe their observations and list anything they considered as program progresses. In addition, each participant was given a disposable camera at the beginning of the Institute. Although the Project Director is not a transportation expert, he served as the academic coordinator, attended all activities, and attempted to give the curriculum a certain amount of cohesiveness.

The enhancement program is the area of the Institute that is in most need of improvement. This part of the program unfortunately suffered due to scheduling problems, illness of instructors, and field trips that lasted longer than expected. However, some of the goals were accomplished as topics were introduced throughout the Institute. For example, all of the career speakers spoke about the need for a well-rounded education and the importance of good communication skills.

In addition to academics, the participants were provided with a recreation program that was well balanced, including activities that were mentally and physically challenging. Organized activities were planned for each evening and each Saturday included a day-long recreational outing. Based on evaluations by the participants and comments from members of the IAB, the WVSC STI was reasonably successful. However, areas needing improvement were identified. These issues will be addressed and hopefully implemented for future STI activities.

West Virginia faced the following challenges:

- Student recruitment;
- Program content and organization; and
- Financial support.

The difficulty in finding qualified participants was the most serious problem. Posters and brochures were distributed to all public high school guidance counselors in the State as soon as it was known that a sub-agreement was indeed forthcoming. However, this effort resulted in only two qualified applicants. Clearly, the lateness with which things happened, coupled with the competition from other programs (e.g., Governor's Honor Academy), made this a very difficult task. There also seemed to be a problem getting support from guidance counselors at the end of the school year.

Other recruitment efforts involved outreach to high school science teachers, the YMCA, preachers, church youth group directors, and local industries that employ participants as interns, which netted some success. In the end, however, it was the work of the IAB and faculty and staff on campus that resulted in 10 of our 18 participants coming to the Institute.

The Project Director has made several recent contacts with counselors, science coordinators, and high school teachers that should help with future efforts. In addition, the Project Director is involved with a minority student recruitment project and will include the STI as part of this effort.

The STI staff will continue to meet weekly to discuss the events of our recent Institute and plan next year's STI. The STI staff especially needs to increase the number and organization of enrichment activities including topics such as written and oral communication skills. Additional mathematics, statistics and sociology courses should be added to the academic program. In addition, participants should work on projects that will involve collecting data from the field, analyzing it with computers and computer-driven instruments, and comparing the results using basic statistics. Computer-aided design programs should also be added.

West Virginia State College appreciates the generosity of the funding agency and recognizes the value of establishing alliances with public and private sector stakeholders to help fund activities. Two agencies, The Greater Kanawha Valley Foundation and Arco Chemical Company, have been contacted to provide financial assistance for future STI activities. Both of these organizations award funds each year on a competitive basis to support a variety of community activities. The STI staff will continue to work to identify potential partners.

V. RECOMMENDATIONS

Observations are shared, and recommendations are made to further enhance the NSTI.

HOST SITES

DIRECT CHARGES

Direct charges on training and education grants at colleges and universities have been found to be as high as 150% of personnel cost. This amount severely limits the dollars available for Institute activities at host sites. The NRC recommends that indirect charges be deemed a non-allowed expense or that the amount allowable for indirect charges be limited to 10% of personnel cost on STI grant awards.

STANDARDIZED TEST SCORES

Given the controversy surrounding standardized test scores and their ability to predict academic performance, the NRC recommends that standardized test scores be made an optional student selection criteria.

PARTICIPANT STIPENDS

Several host sites have faced greater recruitment challenges in the competition for the "best" participants. Many other summer programs now provide minimal stipends. The host sites feel that recruitment efforts will be greatly enhanced if they are allowed to provide stipends. The NRC recommends that host sites be allowed to offer stipends to participants.

CONTINUING PROGRAMS

Program continuity continues to be problematic for host sites and the NRC. Commitments to fund host sites on a two-year cycle should be considered. This would improve the recruitment process and allow host sites the opportunity to concentrate on STI improvements.

NATIONAL RESOURCE CENTER

TRAINING WORKSHOP

The training workshop can be enhanced by including "breakout sessions" to focus on the various program components. To accommodate this and other improvements, the NRC recommends that the annual training workshop be extended to two full days.

HOST SITE EVALUATIONS

The NRC should develop evaluation criteria to assess the performance of host sites. The evaluation could be used as a basis for recommending continuance of host site Institutes.

NOTICE TO PROCEED

The annual notice to proceed as the NSTI NRC should occur no later than October of each year or the cooperative agreement should be awarded on a two-year cycle. This should not only improve management, but also the recruitment of students that are "genuinely" interested in transportation; therefore, increasing the probability of meeting the NSTI objective. The implementation of the suggested time line *(Table 10)* should enhance the efficiency and quality of the NSTI and allow host sites adequate recruitment and program development time for the 2000 and 2001 NSTI.

TABLES

Table 1 — Cost of Summer Transportation Institutes

Federal Cost		*Other Reported Cost*		*Total Cost*	*Host Site*
Amount	*%*	*Amount*	*%*		
$25,002	37%	$42,557	63%	$67,559	University of Missouri Rolla
$35,000	48%	$37,722	52%	$72,722	North Carolina A&T State University
$51,216	50%	$51,216	50%	$102,432	South Carolina State University
$52,942	53%	$47,387	47%	$100,329	Northwest Indian College
$35,000	53%	$30,821	47%	$65,821	City College of NY
$30,000	58%	$22,044	42%	$52,044	Benedict College
$27,798	58%	$20,000	42%	$47,798	Lincoln University (Pennsylvania)
$30,000	62%	$18,700	38%	$48,700	Delaware State University
$30,000	63%	$17,571	37%	$47,571	Arizona State University
$40,104	66%	$20,455	34%	$60,559	Cheyney University of Pennsylvania
$30,000	66%	$15,700	34%	$45,700	Kentucky State University
$30,000	77%	$9,100	23%	$39,100	Morgan State University
$38,710	80%	$9,675	20%	$48,385	West Virginia State College
$40,398	80%	$10,281	20%	$50,679	Florida International University
$34,133	84%	$6,402	16%	$40,535	California State University (Los Angeles)
$35,000	84%	$6,500	16%	$41,500	Virginia State University
$32,711	87%	$5,000	13%	$37,711	Southern University and A&M College
$46,501	90%	$5,000	10%	$51,501	Howard University
$37,638	93%	$3,000	7%	$40,638	University of Arkansas at Pine Bluff
$30,000	95%	$1,600	5%	$31,600	Clark Atlanta University
$30,000	95%	$1,500	5%	$31,500	Bethune Cookman College
$25,000	100%	$0	0%	$25,000	Albany State University
$25,000	100%	$0	0%	$25,000	Lac Courte Oreilles Ojibwa Community College
$30,000	100%	$0	0%	$30,000	Alabama A&M University
$30,000	100%	$0	0%	$30,000	Tennessee State University
$31,462	100%	$0	0%	$31,462	Texas A&M Research Foundation

Federal Cost		*Other Reported Cost*		*Total Cost*	*Host Site*
Amount	*%*	*Amount*	*%*		
$35,008	100%	$0	0%	$35,008	Tuskegee University
$36,727	100%	$0	0%	$36,727	Florida A&M University
$43,200	100%	$0	0%	$43,200	Jackson State University
$46,615	100%	$0	0%	$46,615	Elizabeth City State University
$1,045,165	**73%**	**$382,231**	**27%**	**$1,427,396**	**All Institutes**

Table 2 — Cost Per Participant – Residential Institutes

Number of Participants	*Total Cost*	*Total Cost per Participant*	*Federal Cost*	*Federal Cost per Participant*	*Host Site*
46	$47,571	$1,034	$30,000	$652	Arizona State University
23	$100,329	$4,362	$52,942	$2,302	Northwest Indian College
37	$75,216	$2,033	$51,216	$1,384	South Carolina State University
28	$37,000	$1,321	$35,000	$1,250	Virginia State University
26	$65,615	$2,524	$35,000	$1,346	City College of NY
25	$30,000	$1,200	$30,000	$1,200	Tennessee State University
20	$32,711	$1,636	$32,711	$1,636	Southern University and A&M College
20	$36,727	$1,836	$36,727	$1,836	Florida A&M University
20	$71,046	$3,552	$35,008	$1,750	Tuskegee University
20	$46,615	$2,331	$46,615	$2,331	Elizabeth City State University
19	$49,970	$2,630	$30,000	$1,579	Kentucky State University
18	$42,385	$2,355	$38,710	$2,151	West Virginia State College
18	$49,970	$2,776	$30,000	$1,667	Delaware State University
16	$47,798	$2,987	$27,798	$1,737	Lincoln University (Pennsylvania)
16	$57,718	$3,607	$30,000	$1,875	Benedict College
15	$35,000	$2,333	$35,000	$2,333	North Carolina A&T State University
15	$132,455	$8,830	$40,104	$2,674	Cheyney University of Pennsylvania
15	$47,900	$3,193	$43,200	$2,880	Jackson State University
15	$40,638	$2,709	$37,638	$2,509	University of Arkansas at Pine Bluff
12	$68,155	$5,680	$25,002	$2,084	University of Missouri Rolla
9	$31,500	$3,500	$30,000	$3,333	Bethune-Cookman College
433	**$1,146,319**	**$2,973 (Avg.)**	**$752,671**	**$1,929 (Avg.)**	**All Residential Programs**

Table 3 — Cost Per Student – Non-Residential Institutes

Number of Participants	*Total Cost*	*Total Cost per participant*	*Federal Cost*	*Federal Cost per Participant*	*Host Site*
35	$31,462	$899	$31,462	$899	Texas A&M Research Foundation
27	$30,000	$1,111	$30,000	$1,111	Morgan State University
21	$68,320	$3,253	$45,259	$2,155	Florida International University
20	$40,535	$2,027	$34,133	$1,707	California State University (Los Angeles)
19	$68,001	$3,579	$46,501	$2,447	Howard University
18	$30,000	$1,667	$30,000	$1,667	Alabama A&M University
15	$30,000	$2,000	$30,000	$2,000	Clark Atlanta University
13	$25,000	$1,923	$25,000	$1,923	Albany State University
8	$25,000	$3,125	$25,000	$3,125	Lac Courte Oreilles Ojibwa Community College
176	**$348,318**	**$1,979 (Avg.)**	**$297,355**	**$1,690 (Avg.)**	**All Non-Residential Programs**

Table 4 — Reimbursements

Host Site	*Amount Reimbursed*
Alabama A&M University	$6,045.46
Albany State University	$19,732.46
Arizona State University	$562.19
Benedict College	$322.00
Bethune-Cookman College	$0.00
California State University (Los Angeles)	$0.00
Cheyney University	$0.00
City College of NY	$1,785.81
Clark Atlanta University	$0.00
Delaware State University	$0.00
Elizabeth City State University	$4,271.02
Florida A&M University	$0.00
Florida International University	$1,869.26
Howard University	$6,214.43
Jackson State University	$3,609.11
Kentucky State University	$6,807.46
Lac Courte Oreilles Ojibawa Community College	$31.96
Lincoln University (Pennsylvania)	$2,009.62
Morgan State University	$11,239.89
North Carolina A&T State University	$3,173.68
Northwest Indian College	$3,500.00
South Carolina State University	$2,400.67
Southern University and A&M College	$3,398.65
Tennessee State University	$6,210.00
Texas A&M Research Foundation	$0.00
Tuskegee University	$3,715.63
University of Arkansas at Pine Bluff	$1,206.46
University of Missouri-Rolla	$0.00
Virginia State University	$35,000.00
West Virginia State College	$1,971.30
TOTAL REIMBURSEMENTS	**$125,077.06**

Table 5 — Participant Demographics

1999 NSTI Host Site Demographics													
Host Site	# Applicants	# Participants	# Graduates	# Native Americans	# African Americans	# Caucasians	# Hispanics	# Asians	# Others	# Males	# Females	# Cities	# Counties
Alabama A&M University	20	19	19	0	19	0	0	0	0	10	9	19	1
Albany State University	75	13	13	0	11	0	1	1	1	6	7	3	3
Arizona State University	49	46	46	17	3	1	24	1	0	21	25	19	6
Benedict College	42	16	14	0	16	0	0	0	0	7	9	13	9
Bethune–Cookman College	20	16	16	0	14	1	0	1	0	6	10	12	9
California State University (Los Angeles)	29	20	18	0	0	2	12	6	0	15	5	6	1
Cheyney University	20	20	20	0	10	1	1	8	0	14	6	5	5
City College of NY	26	20	17	0	9	5	4	1	1	17	3	1	1
Clark Atlanta University	17	10	9	1	10	0	0	0	0	4	6	5	5
Delaware State University	24	18	16	0	13	4	1	0	0	7	11	12	4
Elizabeth City State University	27	20	20	0	20	0	0	0	0	8	12	5	4
Florida A&M University	70	20	17	0	15	2	0	0	3	10	10	12	11
Florida International University	16	16	16	0	11	2	3	0	0	5	11	3	1
Howard University	19	19	19	0	14	0	2	3	0	10	9	1	1
Jackson State University	16	16	16	0	16	0	0	0	0	8	8	13	11
Kentucky State University	32	15	15	0	9	6	0	0	0	7	8	8	8
Lac Courte Oreilles Ojibwa Community College	13	13	8	13	0	0	0	0	0	9	4	3	1
Lincoln University (Pennsylvania)	15	15	14	0	15	0	0	0	0	8	7	2	2
Morgan State University	38	27	27	0	38	0	0	0	0	12	15	1	2
North Carolina A&T State University	20	13	12	0	13	0	0	0	0	6	7	3	3
Northwest Indian College	23	23	13	23	0	0	0	0	0	13	10	10	5
South Carolina State University	80	40	40	0	39	0	0	0	1	25	15	18	12

1999 NSTI Host Site Demographics													
Host Site	# Applicants	# Participants	# Graduates	# Native Americans	# African Americans	# Caucasians	# Hispanics	# Asians	# Others	# Males	# Females	# Cities	# Counties
Southern University and A&M College	35	24	24	0	23	1	0	0	0	11	13	5	5
Tennessee State University	25	25	25	0	25	0	0	0	0	13	12	5	5
Texas A&M Research Foundation	42	35	35	0	27	0	5	0	3	17	18	4	4
Tuskegee University	25	20	20	0	20	0	0	0	0	7	13	11	11
University of Arkansas at Pine Bluff	15	15	15	0	15	0	0	0	0	8	7	5	5
University of Missouri–Rolla	22	18	16	0	18	0	0	0	0	10	8	2	2
Virginia State University	28	28	28	0	28	0	0	0	0	12	16	12	10
West Virginia State College	21	18	18	0	5	13	0	0	0	7	11	11	4
All Host Sites	**904**	**618**	**586**	**54**	**456**	**38**	**53**	**21**	**9**	**313**	**305**	**229**	**151**

Table 6 — Mean Responses to Speaker Evaluation Questions

1999 NSTI Host Site Speaker Evaluations					
Host Site	*Speaker Question 1*	*Speaker Question 2*	*Speaker Question 3*	*Speaker Question 4*	*Speaker Overall*
Alabama A&M University	1.4	1.4	1.4	1.4	1.4
Albany State University	1.8	1.2	1.2	1.2	1.4
Arizona State University	*Information Unavailable*				
Benedict College	1.5	1.0	1.2	1.3	1.3
Bethune–Cookman College	1.2	1.2	1.1	1.3	1.2
California State University (Los Angeles)	1.3		1.3	1.6	1.4
Cheyney University	2.1	1.7	1.5	1.8	1.8
City College of NY	1.98	1.6	2.1	2.1	1.9
Clark Atlanta University	2.2	1.2	1.8	1.3	1.6
Delaware State University	2.4	2.3	2.7	2.4	2.4
Elizabeth City State University	2.3	1.9	1.8	2.0	2.0
Florida A&M University	1.7	1.3	1.6	1.8	1.6
Florida International University	1.0	1.0	1.0	1.0	1.0
Howard University	1.4	1.2	1.9	1.6	1.5
Jackson State University	1.1	1.1	1.1	1.1	1.1
Kentucky State University	1.7	1.3	1.6	1.8	1.6
Lac Courte Oreilles Ojibwa Comm. College	2.0	1.9	2.3	2.3	2.1
Lincoln University (Pennsylvania)	1.8	1.5	1.5	1.9	1.7
Morgan State University	1.5	1.1	1.5	1.5	1.4
North Carolina A&T State University	2.1	1.1	1.4	1.6	1.5
Northwest Indian College	*Information Unavailable*				
South Carolina State University	1.8	1.3	1.6	1.8	1.6
Southern University and A&M College	1.4	1.4	1.2	1.5	1.4
Tennessee State University	*Information Unavailable*				
Texas A&M Research Foundation	1.4	1.0	1.3	1.6	1.3
Tuskegee University	2.7	1.5	2.3	2.7	2.3
University of Arkansas at Pine Bluff	1.3	1.1	1.2	1.2	1.2
University of Missouri–Rolla	1.6	1.1	1.6	1.9	1.5
Virginia State University	1.3	1.3	1.2	1.3	1.3
West Virginia State College	1.3	1.3	1.2	1.3	1.3

Speaker Questions:
1. The information presented by the speakers was clear and interesting.
2. I learned something new about transportation careers from the speakers.
3. The speakers responded well to questions.
4. The speakers were excited about the program.

Table 7 — Mean Responses to Field Trip Evaluation Questions

1999 NSTI Host Site Field Trip Evaluations					
Host Site	*Field Trip Question 1*	*Field Trip Question 2*	*Field Trip Question 3*	*Field Trip Question 4*	*Field Trip Overall*
Alabama A&M University	1.2	1.2	1.2	1.2	1.2
Albany State University	1.1	1.1	1.8	1.5	1.4
Arizona State University	*Information Unavailable*				
Benedict College	1.5	1.0	1.2	1.3	1.2
Bethune–Cookman College	1.3	1.9	1.1	1.3	1.4
California State University (Los Angeles)	1.3	1.3	1.4	1.3	1.3
Cheyney University	1.7	1.8	1.7	1.8	1.8
City College of NY	1.7	1.5	1.9	3.8	2.2
Clark Atlanta University	1.3	1.6	1.3	1.6	1.6
Delaware State University	2.7	2.0	2.0	2.0	2.2
Elizabeth City State University	2.1	2.1	1.6	2.3	2.0
Florida A&M University	1.2	1.3	1.4	1.2	1.3
Florida International University	1.0	1.0	1.0	1.0	1.0
Howard University	1.2	1.2	1.2	2.7	1.6
Jackson State University	1.0	1.1	1.1	1.1	1.1
Kentucky State University	1.2	1.3	1.4	1.2	1.3
Lac Courte Oreilles Ojibwa Comm. College	1.9	1.8	2.1	2.2	2.0
Lincoln University (Pennsylvania)	1.5	1.6	1.6	1.4	1.5
Morgan State University	1.4	1.5	1.5	1.3	1.4
North Carolina A&T State University	2.1	1.6	1.8	1.6	1.8
Northwest Indian College	*Information Unavailable*				
South Carolina State University	1.7	1.6	1.6	1.9	1.7
Southern University and A&M College	1.5	1.3	1.5	1.2	1.4
Tennessee State University	*Information Unavailable*				
Texas A&M Research Foundation	1.2	1.3	1.1	1.0	1.2
Tuskegee University	1.6	1.5	1.5	1.8	1.6
University of Arkansas at Pine Bluff	1.3	1.2	1.2	1.2	1.2
University of Missouri–Rolla	1.4	1.2	1.3	1.4	1.4
Virginia State University	1.5	1.7	1.9	3.7	2.2
West Virginia State College	1.4	1.5	1.4	1.3	1.3

Field Trip Questions:
1. Field trips were informative and interesting.
2. Field trips added realism to the topics covered by speakers.
3. Field trips helped in understanding topics covered by speakers.
4. The number of field trips was appropriate.

Table 8 — Mean Responses to Activities Evaluation Questions

1999 NSTI Host Site Activities Evaluations				
Host Site	*Activities Question 1*	*Activities Question 2*	*Activities Question 3*	*Activities Overall*
Alabama A&M University	1.1	1.1	1.1	1.1
Albany State University	1.6	1.5	1.7	1.6
Arizona State University	*Information Unavailable*			
Benedict College	1.2	1.3	1.6	1.3
Bethune–Cookman College	1.5	1.3	1.9	1.5
California State University (Los Angeles)	1.1	1.3	1.5	1.3
Cheyney University	1.8	1.9	2.4	2.0
City College of NY	2.8	2.3	2.7	2.6
Clark Atlanta University	1.8	1.6	2.1	1.8
Delaware State University	2.3	2.3	2.0	2.2
Elizabeth City State University	2.2	1.9	2.0	2.0
Florida A&M University	1.4	1.3	1.5	1.4
Florida International University	2.0	2.0	2.0	2.0
Howard University	1.5	1.1	2.1	1.6
Jackson State University	1.2	1.1	1.8	1.4
Kentucky State University	1.4	1.3	1.5	1.4
Lac Courte Oreilles Ojibwa Comm. College	2.1	2.0	2.1	2.1
Lincoln University (Pennsylvania)	1.5	1.3	1.4	1.4
Morgan State University	1.4	1.3	1.8	1.5
North Carolina A&T State University	1.6	1.4	1.8	1.6
Northwest Indian College	*Information Unavailable*			
South Carolina State University	1.5	1.4	1.5	1.5
Southern University and A&M College	1.2	1.0	1.0	1.1
Tennessee State University	*Information Unavailable*			
Texas A&M Research Foundation	1.3	1.2	1.3	1.3
Tuskegee University	1.6	1.6	1.6	1.6
University of Arkansas at Pine Bluff	1.4	1.4	1.4	1.4
University of Missouri–Rolla	1.6	1.6	1.8	1.7
Virginia State University	2.7	1.9	2.6	2.4
West Virginia State College	1.3	1.4	1.4	1.4

Activities Questions:
1. Project activities helped me understand topics covered.
2. Project activities gave practical experience related to transportation topics.
3. Adequate time was allowed for project activities.

Table 9 — Mean Responses to Staff Evaluation Questions

1999 NSTI Host Site Staff Evaluations						
Host Site	*Staff Question 1*	*Staff Question 2*	*Staff Question 3*	*Staff Question 4*	*Staff Question 5*	*Staff Overall*
Alabama A&M University	1.0	1.0	1.0	1.0	1.0	1.0
Albany State University	1.3	1.6	1.7	1.7		1.6
Arizona State University	*Information Unavailable*					
Benedict College	1.0	1.1	1.2	1.2	1.1	1.1
Bethune–Cookman College	1.3		1.3	1.6	1.4	1.4
California State University (Los Angeles)	1.3	1.2	1.1	1.3	1.2	1.2
Cheyney University	1.9	1.6	1.8	1.6		1.7
City College of NY	2.3	2.3	2.0	2.0	2.0	2.2
Clark Atlanta University	1.6	1.6	1.3	1.8	1.6	1.6
Delaware State University	2.0	1.7	1.7	2.3	1.7	1.9
Elizabeth City State University	2.2	1.9	1.7	2.0	2.1	2.0
Florida A&M University	1.5	1.5	1.4	1.7	1.2	1.5
Florida International University	2.0	2.0	2.0	2.0	2.0	2.0
Howard University	1.5	1.5	1.6	1.7	1.8	1.6
Jackson State University	1.1	1.6	1.1	1.2	1.1	1.2
Kentucky State University	1.5	1.5	1.4	1.7	1.2	1.5
Lac Courte Oreilles Ojibwa Comm. College	2.1	2.4	2.1	1.9	2.0	2.1
Lincoln University (Pennsylvania)	1.3	1.3	1.3	1.8	1.3	1.4
Morgan State University	1.4	1.5	1.6	1.4	1.5	1.5
North Carolina A&T State University	1.2	1.5	1.2	1.3	1.1	1.2
Northwest Indian College	*Information Unavailable*					
South Carolina State University	1.6	1.8	1.6	1.9	2.4	1.9
Southern University and A&M College	1.6	1.4	1.4	1.5	1.3	1.5
Tennessee State University	*Information Unavailable*					
Texas A&M Research Foundation	1.3	1.3	1.2	1.2	1.3	1.3
Tuskegee University	1.6	1.4	1.5	1.5	1.4	1.4
University of Arkansas at Pine Bluff	1.4	1.2	1.3	1.1	1.2	1.2
University of Missouri–Rolla	1.4	1.2	1.3	1.1	1.2	1.2
Virginia State University	1.4	1.4	1.4	1.4	1.4	1.4
West Virginia State College	1.4	1.4	1.4	1.4	1.3	1.4

Staff Questions:
1. The staff was very interested in me becoming aware of transportation careers.
2. The staff was very helpful when I had problems.
3. The staff had a good attitude towards academic excellence.
4. The staff was available when I had problems.
5. The staff was friendly and encouraging when I had difficulty.

Table 10 — Suggested Time Line

Major Task	*Responsible Organization*	*2000 Date*	*2001 Date*
Request for Applications for New Host Sites	FHWA	December	July
Formal Request to Renew Host Site	FHWA	December	September
Submission of Renewal Application — Application Should Include Letters of Support, Commitment to Adhere to Program Guidelines, Assurances, etc.	Host Sites	December	September
Continuing Host Sites Notified of Approval to Continue	NRC	January	September
NRC Final Report Due	FHWA	November	November
Interest Workshop for Prospective New Host Sites	FHWA	December	September
Reports from New Host Sites Due	FHWA	January	October
Sub-Agreements for Continuing Programs Executed	NRC	February	January
Annual Training Workshop	NRC	February	January
Sub-Agreements for New Programs Executed	FHWA	March	February
Host Site Final Reports Due	FHWA	August	August

APPENDICES

APPENDIX A —
1999 TRAINING WORKSHOP AGENDA

NATIONAL SUMMER TRANSPORTATION INSTITUTE
1999 TRAINING WORKSHOP

THURSDAY, APRIL 1 – FRIDAY, APRIL 2, 1999
HYATT REGENCY, ATLANTA
CAIRO HONG KONG ROOM
ATLANTA, GEORGIA

APRIL 1, 1999

OPENING SESSION ..... 8:00 a.m. 9:00 a.m.

Welcome ..... Clarence W. Hill
Director
NSTI Resource Center

Greetings ..... Dr. Leroy Davis
President
South Carolina State University

Opening Remarks ..... Ms. Gloria J. Jeff
Deputy Administrator
Federal Highway Administrator

RECOGNITIONS

Introduction of Workshop Participants

I. NSTI Organization ..... 9:00 a.m. 10:15 a.m.
Clarence W. Hill

A. NSTI Resource Center
Program Management Center
Budget and Finance Center
Data Reporting Clearinghouse

B. Contact Persons

C. Host Site Organization

BREAK
10:15 a.m. 10:30 a.m.

II. Program Management ..... 10:30 a.m.–12:00 p.m.
Dr. Veretta J. Sabb

A. STI Curriculum Guidelines
Academic Program
Evening/Enhancement Program
Weekend/Sports/Recreation Program
Curriculum Review/Approval

LUNCH
12:00–1:30 p.m.
ON YOUR OWN

II. Program Management (continuation) ..... 1:30 p.m.–3:00 p.m.
Clarence W. Hill

B. Student Selection Process
Marketing and Application
Acceptance Packages
C. Orientation Program
D. Conduct/Incident Reports and Medical/Injury Reports
E. Closing/Award Program

BREAK
3:00 p.m.–3:15 p.m.

III. Evaluations and Surveys ..... 3:15 p.m.–4:15 p.m.
Dr. Veretta J. Sabb

IV. Financial Management ..... 4:15 p.m.–5:00 p.m.
Dr. Veretta J. Sabb

Scheduled Time To Meet With NRC Staff ..... 5:00 p.m.–7:00 p.m.

RECEPTION
EXECUTIVE CONFERENCE ROOM 219
7:00 p.m.–11:00 p.m.

APRIL 2, 1999

V. Data Collection ..... 8:00 a.m.–9:30 am
Clarence W. Hill

A. The Approved Budget
B. Budget Revisions
C. Account Management
D. Request for Payment
E. Final Financial Report

BREAK

VI. Final Report ..... 9:45 a.m.–10:15 a.m.
Clarence W. Hill

A. Data Reporting
B. Web sites
C. Data Rights

VII. The Sub-Agreement ..... 10:15 a.m.–12:00 p.m.
Dr. Veretta J. Sabb

Closing Remarks ..... Clarence W. Hill
Mrs. Hattie Brown

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Robert M. Pratt Special Training Officer West Virginia DOT	1522 Skyline Rd. Charleston, WV 25314 (304) 342–7253	(304) 342–2958 rpratt1014@aol.com
Aldridge Wright Strategic Planning Quality Coordinator FHWA SRL	61 Forsyth St., Ste. 17T26 Atlanta, GA 30303 (404) 562–3684	(404) 562–3700 walrdridge@fhwa.dot.gov
Doris Palmer Director, Student Support Services Delaware State University	1200 N. Dupont Hwy Dover, DE 19901 (302) 739–2704	(202) 739–7338 dpalmer@dsc.edu
Hassan Hashemian Professor California State University, LA	5151 State University Dr. Los Angeles, CA 90032 (323) 343–4499	(323) 343–6316 hhashem@calstatela.edu
Mary Ann McCartney, Director Office of Minority Engineering Programs Arizona State University	P.O. Box 875506 Tempe, AZ 85287-5506 (602) 965–8295	(602) 965–8398 MAC@ASU.edu
Eugene S. Johnson Director for DBE Programs Office Wisconsin DOT	P.O. Box 7965 Madison, WI 53727 (608) 267–9527	(608) 267–3641
LaTonya Ray Alabama A&M University	6215 Menifee Dr. Huntsville, AL 35810 (205) 859–1107	
Sandra Talbert Jackson Civil Rights Specialist FHWA Maryland Division	711 West 40 St. Baltimore, MD 21211 (410) 962–4342 ext. 133	(410) 962–4054
Ellis Woodall Strategic Planner Georgia DOT	2 Capitol Square Atlanta, GA 30334 (404) 657–5229	(404) 657–5228 ellis.woodall@dot.state.ga.us
Benjamin Newhouse, Dean College of Business, Tuskegee University	Tuskegee, AL 36088 (334) 727–8116	(334) 727–8604 bnewhouse@acd.tusk.edu
Felicia Williams Project Director University of Arkansas at Pine Bluff	1200 University Dr. Pine Bluff, AR 71611 (870) 543–8983	(870) 543–8934
Oscar L. Dean Asst. Project Director University of Arkansas at Pine Bluff	1100 Wright Ave. Little Rock, AR 72204 (501) 324–2440	(501) 324–2439
Robert L. Scott Professor Project Director Benedict College	1600 Harden St. Columbia, SC 29203 (803) 253–5186	(803) 253–5074

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Dana W. Glenn Director of Sponsored Programs West Virginia State University	P.O. Box 1000, Campus Box 180 Institute, WV 25112 (304) 766-3026	(304) 766-3308 glenndw@mail.wvsc.edu
Jeannie Simms Transportation Specialist FHWA	700 Washington St., East, Ste. 200 Charleston, WV 25301 (304) 347-5931	(304) 347-5103 Jeannie.Simms@fhwa.dot.gov
Robert A. Johnson, Jr. Asst. Professor of Mathematics Southern University A&M College	P.O. Box 9759 Baton Rouge, LA 70813 (225) 771-5180	(225) 771-4762 rjohnson@subr.edu
Gary S. Spring Associate Professor University of Missouri-Rolla	Department of Civil Engineering Rolla, MO 65401 (573) 341-6286	(573) 341-4729 spring@umr.edu
Patrick Carriere Professor and Interim Chair Southern University A&M College	P.O. Box 9969 Baton Rouge, LA (225) 771-5870	(225) 771-4320 carriere@engr.subr.edu
Kwo-Sun Chu Dean, Arts and Sciences Cheyney University of Pennsylvania	Cheyney Rd. Cheyney, PA 19319 (610) 339-2308	(610) 399-2197
Roberto A. Escalera Civil Rights Coordinator FHWA	227 N. Bronough St., Ste. 2015 Tallahassee, FL 32312 (850) 942-9610	(850) 942-9691 roberto.a.escalera@fhwa.dot.gov
David Law Technology and Systems Engineer FHWA	1835 Assembly St., Ste. 758 Columbia, SC 29201 (803) 253-3886	(803) 253-3989 dlaw@sc.fhwa.dot.gov
Neville Parker Professor, Civil Engineering; Director, Institute for Transportation Systems City College of New York/CUNY	Convent Ave. & 135th St. New York, NY 10031 (212) 650-8050	(212) 650-8374 parker@ti-mail.engr.ccny.cuny.edu
Dr. Gleyn E. Bledsoe Associate Dean Northwest Indian College	2522 Kwina Rd. Bellingham, WA 98199 (360) 676-2772	(360) 647-7084 gleyn@nwic.edu
Robert H. Mathes DBE/Title VI Officer North Carolina DOT	401 Oberlin Rd. Raleigh, NC 27611 (919) 733-2300	

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Leslie Trimble Asst. Director Tuskegee University	1103 Old Montgomery Rd. Tuskegee, AL 36088 (334) 727–3527	(334) 727–0116 ltrimble@tusk.acd.edu
Errol C. Noel Professor Howard University	2300 Sixth St., NW Washington, DC 20059 (202) 806–6668	(202) 806–5771 enoel@fac.howard.edu
Victor Ochieng Project Coordinator CCNY–ITS CCNY–CUNY	137 Convent Ave. New York, NY 10031 (212) 650–8145	viochieng@hotmail.com
Arthur T. O'Connor Transportation Management Engineer USDOT/FHWA — NYC Metropolitan Office	1 Bowling Green Room 428 New York, NY 10004 (212) 668–2206	(212) 668–2136 Authur.O'Connor@FHWA.dot.gov
Eric Vilhauer Computer Instructor Lac Courte Oreilles Ojibwa Community College	13466 W. Trepania Rd. Hayward, WI 54843 (715) 634–4790 EXT. 118	(715) 634–5049 evil@lco-college.edu
Carla Foster EEO Representative Georgia DOT	#2 Capital Square, SW, Rm. 262 Atlanta, GA 30334 (404) 656–5323	(404) 656–5509
Pamela Foster Civil Rights Specialists FHWA South Carolina Division Office	1835 Assembly St., Ste. 758 Columbia, SC 29201 (803) 253–3879	
Isaac Richmond Nettey Director, Airway Science Texas Southern University	3100 Cleburne Ave. Houston, TX 77004 (712) 313–1847	(713) 313–1821 tchtirnettey@tsu.edu
W. Neal Holmes Asst. Professor Cheyney University	P.O. Box 50 Cheyney, PA 19319 (610) 399–2201	(610) 399–2603 wholmes@biddle.cheyney.edu
Zachary Young Assoc. Director, Earth Systems Sciences Clark Atlanta University	James P. Brawley Dr. Atlanta, GA 30374 (404) 880–6422	(404) 636–0295 yzach@mindsping.com
Dr. Peter Molnar Research Associate Clark Atlanta University	James P. Brawley Dr. Atlanta, GA 30374 (404) 880–6419	(404) 880–8360 pmolnar@cau.edu
Dr. Jan Christopher Associate Professor Delaware State University	1200 North Dupont Hwy Dover, DE 19901 (302) 739–7644	(302) 739–3517 jchristo@dsc.edu

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Aubrey E. Long Chair, Division of Business Bethune–Cookman College	640 Mary McLeod Bethune Blvd. Daytona Beach, FL 32115 (904) 255-1401 EXT. 355	(904) 255-3989 longa@cookman.edu
Cassandra K. Rogers, Admin Coordinator North Carolina A&T State University Transportation Institute	302 Merrick Hall Greensboro, NC 27411 (336) 334-7745	(336) 334-7093
Ganga P. Ramdas Chair, Department of Economics and Business Lincoln University (Pennsylvania)	Southern Chester Co. Lincoln, PA 19352 (610) 932-8300	(610) 932-1079
Clarence Bowie Asst. to Trng. Director Mississippi DOT	401 N. West St. Jackson, MS 39201 (601) 359-7350	(601) 359-7054 cbowie@MDOT.state.ms.us
Tawanda M. Nutt Fiscal Administrator Morgan State University	1700 E. Coldspring Ln. Baltimore, MD 21251 (443) 885-3668	(410) 319-9571 tnutt@morg.morgan.edu
Joyce E. Trussell Student Coordinator Morgan State University	1700 E. Coldspring Ln. Baltimore, MD 21251 (443) 885-3666	(410) 319-3571
Jose H. Guerrier Research Assistant Professor University of Miami School of Medicine Florida International University	1425 NW 10th Ave. Miami, FL 33138 (305) 243-4593	(305) 243-4414 jguerrie@coeds.eng.miami.edu
Ilene D. Payne, Ph.D. Director, Universities and Grants Programs FHWA/USDOT	4600 N. Fairfax Dr. Arlington, VA 22203 (703) 235-0535	(703) 235-0593 ilene.payne@fhwa.dot.gov
Joseph H. Beier Project Director South Carolina State University	300 College St., NE Orangeburg, SC 29117 (803) 536-8860	(803) 533-3955
Marilyn Chambers Financial Manager FHWA	666 North St., Ste. 105 Jackson, MS 39202 (601) 965-4224	(601) 965-4231 marilyn.chambers@fhwa.dot.gov
Garry Quinn Director, DRE Tuskegee University	1106 Old Montgomery Rd. Tuskegee, AL 36088 (334) 727-3527	(334) 727-0116

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Frank Grabski Divisions Bridge Engineer FHWA--Louisiana Division	P.O. Box 3929 Baton Rouge, LA 70821 (225) 389-0467	(225) 389-0758 frank.grabsski@fhwa.dot.gov
Alveta Addison Program Coordinator STI/ Project Manager Howard University, CEACS	2300 6th St., NW Washington, DC 20059 (202) 806-7116	(202) 806-5238 addison@dcl.eng.howard.edu
Melvyn Cooper Realty Officer FHWA	640 Grassmere Park, Ste. 112 Nashville, TN 37211 (615) 781-5767	(615) 781-5773 mcooper@fhwa.dot.gov
Roderick M. Kelly Safety Investigator USDOT	Sam Nunn Federal Bldg. 61 Forsyth St., Ste. 18775 Atlanta, GA 30034 (404) 562-3628	(404) 562-3704
William Kerney Equal Opportunity Specialist II Pennsylvania DOT Bureau of Equal Opportunity	555 Walnut St., 9th Fl. Forum Pl. Harrisburg, PA 17101 (717) 783-1038	(717) 772-4026
Jimmy Patterson Instructor South Carolina State University	4388 Columbia Rd. Orangeburg, SC 29118 (803) 536 3891	
Charles A. Wright Professor Florida A&M University	P.O. Box 164 Tallahassee, FL 32307 (850) 599-8623	(850) 561-2739 cwright4@famu.edu
Terry L. Chis Transportation Safety Engineer FHWA-Kentucky	P.O. Box 536 330 W. Broadway Frankfort, KY 40602 (502) 223-6750	(502) 223-6735 terry.chism@fhwa.dot.gov
Bill Van Luchene Environment Technology Engineer FHWA-Alabama	500 Eastern Blvd., Ste. 200 Montgomery, AL 36117 (334) 223-7379	(334) 223-7325
Hattie Brown Agreement Officer Technical Rep. FHWA	6401 Willow Way Clinton, MD 20735 (202) 366-1591	(202) 366-1599
Ilse van Goth Training Specialist NHI	4600 N. Fairfax St. Arlington, VA 22234 (703) 235-0529	ilse.vangoth.govfhwa.nh

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Lubertha E. James Administrative Secretary — Dept. of Technology Elizabeth City State University	1704 Weeksville Hwy., Elizabeth City, NC 27909 (252) 335-3439	(252) 335-3760 jamele@ecsu.edu
Beverly T. Kuhn Director Center for Professional Capacity Bldg. Texas A&M Research Foundation	7715 Chevy Chase Dr., Ste. 4160 Austin, TX, 78752 (512) 467-0946	(512) 467-8971 b-Kuhn@tamu.edu
Loretta Green Program Coordinator Tennessee State University	3500 John A. Meritt Blvd. Nashville, TN 37209 (615) 963-5401	(615) 963-5397
Decatur B. Rogers Dean, College of Engineering & Technology Tennessee State University	3500 John A. Merritt Blvd. Nashville, TN 37209 (615) 963-5401	(615) 963-5397 drogers@picard.tristate.edu
Linda J. Brown Assoc. Director, Office of Civil Rights FHWA	400 7th St., SW, Rm. 4132 Washington, DC 20590 (202) 366-1593	(202) 366-1599 Linda.J.Brown@fhwa.dot.gov
Ali Ansari Associate Professor Virginia State University	P.O. Box 9032 Petersburg, VA 23806 (804) 524-5126	(804) 524-6732 aansari@vsu.edu
Sylvan Jolibois Assistant Professor/Deputy Director Florida International University	10555 West Flager St. Miami, FL 33199 (305) 348-3485	(305) 348-2802 Jolibois@eng.fiu.edu
David S. Reeves Instructor Jackson State University	1700 Lynch St. Jackson, MS 39217 (601) 968-2466	(601) 968-2466
Sheila C. Porterfield Assistant Professor — Project Director Jackson State University	1700 Lynch St. Jackson, MS 39217 (601) 973-3326	(601) 968-2690
Lavern Collier Admin. Program Assistant FHWA	700 W. Capitol, Rm. 3130 Little Rock, AR 72201 (501) 324-5625	(501) 324-6423 Lavern.collier@fhwa.dot.gov
Alice Sykes Program Mgr., Universities & Grants Programs	4600 N. Fairfax Dr., Ste. 800 Arlington, VA 22203 (703) 235-0536	(703) 235-0593 alice.sykes@fhwa.dot.gov
Ron Green Asst. Director — ALDOT Alabama DOT	1409 Coliseum Blvd. Montgomery, AL 36130 (334) 242-6706	Greenr@dot.al.us

APPENDIX B —
1999 WORKSHOP ATTENDEES

Name *Title*	*Address/Phone*	*FAX* *E-mail Address*
Regina B. Artis Program Coordinator North Carolina A&T State University	302 Merrick Hall Greensboro, NC 27411 (336) 334–7745	(336) 334–7093 artisr@ncat.edu
Linda Ward Director, Seaquest Program Northwest Indian College	2522 Kwina Rd. Bellingham, WA 98226 (360) 676–2772 Ext. 311	
Eugene Black Project Director Alabama A&M University	P.O. Box 818 Normal, AL 35762 (256) 858–4140	(256) 851–5581 eblack@aamu.edu
Clifford Barnes Program Coordinator Bethune–Cookman College	640 Mary McLeod Bethune Blvd. Daytona Beach, FL 32114 (904) 255–1401 Ext 399	(904) 255–3989
Robert Harris Asst. Professor West Virginia State College	P.O. Box 1000, Dept. of Biology Institute, WV 25112 (304) 766–3128	(304) 766–4127 harrisro@ernie.wvsc.edu
Faye DiMassimo Assist. Division Administration Georgia Division Administration	61 Forsyth St., 17T100 Atlanta, GA 30127 (404) 562–3635	(404) 562–3703 faye.dimassimo@fhwa.dot.gov
Ed Powe, Spec. Asst. V.P. for Academic Affairs for Educ Outreach Kentucky State University	400 East Main St. Frankfort, KY 40601 (502) 227–6172	(502) 227–6763 epowe@gwmail.kysu.edu
Thomas J. Perry, Jr. Prof. of Albany State Albany State	504 College Dr. Albany, GA 31705 (912) 430–2959	
Iz Osayimwese Director/Prof. Lincoln University Lincoln University (Pennsylvania)	P.O. Box 179 Lincoln, PA 19352 (610) 932–1229	(610) 932–1079 iosayimwese@lu.lincoln.edu

APPENDIX C —
1999 STI HOST SITE PROJECT DIRECTORS

Host Site	Project Director	Address	Phone FAX	E-mail
1. Alabama A&M University	Mr. Eugene Black	P.O. Box 818 4900 Meridian St., N Normal, AL 35762	(256) 858-4140 (256) 851-5586	EBLACK@aamu.edu
2. Albany State University	Dr. Thomas J. Perry	Department of Criminal Justice 504 College Dr. Albany, GA 31705	(912) 430-2959 (912) 430-4600	tperry@asuram.edu
3. Arizona State University	Ms. Cathryne Jordan	College of Engineering and Applied Sciences P.O. Box 875506 Temple, AZ 85287-5506	(602) 965-8275 (602) 965-8398	leonaj@asu.edu
4. Benedict College	Dr. Robert L. Scott	Administration 1600 Harden St. Columbia, SC 29204	(803) 253-5186 (803) 253-5074	colej@benedict.edu
5. Bethune-Cookman College	Mr. Clifford Barnes	Administration 640 Dr. Mary McLeod Bethune Blvd. Daytona Beach, FL 32114-3099	(904) 255-1401 Ext. 399 (904) 255-3989	barnesc@cookman.edu
6. California State University (Los Angeles)	Dr. Hassan Hashemian	Administration 5151 State University Dr. Los Angeles, CA 90032	(323) 343-4499 (323) 343-4555	hhashem@calst.edu
7. Cheyney University of Pennsylvania	Dr. Kwo-Sun Chu	Cheyney and Creek Rds. Cheyney, PA 19319	(610) 399-2308 (610) 399-2197	
8. City College of NY	Dr. Neville Parker	Y Building, Room 220 30 West Broadway New York, NY 10031	(212) 650-8050 (212) 650-8374	parker@ti-mail.engr.ccny.cuny.edu
9. Clark Atlanta University	Dr. Peter Molnar	223 James P. Brawley Dr., SW Atlanta, GA 30314	(404) 880-6419 (404) 880-8360	pmolnar@cau.edu
10. Delaware State University	Dr. Jan E. Christopher	Administration 1200 N. Dupont Hwy Dover, DE 19901-2277	(302) 739-7644 (302) 739-9642	jchristo@dsu.edu

APPENDIX C —
1999 STI HOST SITE PROJECT DIRECTORS

Host Site	Project Director	Address	Phone FAX	E-mail
11. Elizabeth City State University	Dr. Ellis E. Lawrence	Campus Box 822 1704 Weeksville Hwy. Elizabeth City, NC 27909	(252) 335–3444 (252) 335–3760	Elawrenc@umfort.cs.ecsu.edu
12. Florida A&M University	Dr. Charles Wright	400 Foote Hilyer Administration Tallahassee, FL 32307	(850) 599 8623 (850) 561 2739	cwright4@famu.edu
13. Florida International University	Dr. Sylvan C. Jolibois	Center for Engineering & Applied Science 10555 West Flagler St., Room 3685 Miami, FL 33174	(305) 348–3485 (305) 348 2802	jolibois@eng.fiu.edu
14. Howard University	Dr. Errol C. Noel	Department of Civil Engineering School of Engineering 2300 Sixth St. NW Washington, DC 20059	(202) 806 6668 (202) 806–5771	eroel@fac.howard.edu or eroel@erols.com
15. Jackson State University	Ms. Sheila C. Porterfield	P. O. Box 17145 Jackson, MS 39217	(601) 973 3326 (601) 968 2690	
16. Kentucky State University	Mr. Ed Powe	Administration 400 East Main St. Frankfort, KY 40601	(502) 227–6172 (502) 227 6763	epowe@gwmail.kysu.edu
17. Lac Courte Oreilles Ojibwa Community College	Mr. Eric Vilhauer	13466 W. Trepania Rd. Hayward, WI 54843	(715) 634–4790 (715) 634 5049	evil@lco-college.edu
18. Lincoln University (Pennsylvania)	Dr. Osayimwese	Administrator Chester County Chester, PA 19352	(610) 932–8300 Ext. 1229 (610) 932 1079	iosayimwese@lu.lincoln.edu
19. Morgan State University	Ms. Joyce Trussell	Fiscal Administrator 1700 E. Cold Spring Ln. Baltimore, MD 21251	(443) 885 4813 (410) 319 3571	jtrussell@moac.morgan.edu
20. North Carolina A&T State University	Ms. Joyce Johnson	Transportation Institute 1601 East Markey St. Greensboro, NC 27411	(336) 334 7745 (336) 334 7093	joycej@ncat.edu

APPENDIX C —
1999 STI HOST SITE PROJECT DIRECTORS

Host Site	Project Director	Address	Phone FAX	E-mail
21. Northwest Indian College	Dr. Glen Bledsoe	Dean of Science 2522 Kwina Rd. Bellingham, WA 98226	(360) 676 2772 (360) 647 7084	gleyn@nwic.edu
22. South Carolina State University	Dr. Joseph Beier	School of Engineering Technology and Sciences 300 College St. Orangeburg, SC 29117-0001	(803) 536 8475 (803) 539–2166	ZFBeier@scsu.edu
23. Southern University and A&M College	Dr. Patrick Carriere	Office of Grants and Sponsored Programs Southern University P.O. Box 396 Baton Rouge, LA 70813	(225) 771–5870 (225) 771–4320	Carriere@engr.subr.edu
24. Tennessee State University	Dr. Decatur B. Rogers	3500 John A. Merritt Blvd. Summer Transportation Institute Nashville, TN 37209-1561	(615) 963 5401 (615) 963 9315	drogers@picard.tnstate.edu
25. Texas A&M Research Foundation	Dr. Naomi W. Lede	187 FM 1791 Huntsville, TX 77340 2006	(409) 291 9781 (409) 435 1615	Lede@lcc.net
26. Tuskegee University	Mr. Garry Quinn	1103 Old Montgomery Rd. Tuskegee, AL 36088	(334) 727 3527 (334) 727 0116	Quinn@aed.tusk.edu
27. University of Arkansas at Pine Bluff	Ms. Felicia Williams	Mathematical Science 1200 N. University Pine Bluff, AR 71611	(870) 536 8475 (501) 543–8055	williams_f@vx4500.uapb.edu
28. University of Missouri–Rolla	Dr. Gary S. Spring	Technical 1870 Miners Cir. Rolla, MO 65409	(573) 341 6286 (573) 341 4729	Spring@umr.edu
29. Virginia State University	Dr. Ali Anser	Engineering Tech Department 1 Hayden Dr. Petersburg, VA 23806	(804) 524 5126 (804) 524 6737	aansari@vsu.edu
30. West Virginia State College	Dr. Robert Harris	P.O. Box 1000 Campus Box 180 Institute, WV 25112	(304) 766 3128 (304) 766 4127	harrisro@ernie.wvsc.edu

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
1. Alabama A&M University	Mr. Eugene Black, Project Director Mr. Marion Ray, Director, Academic Program Mr. Gaffer Ellis, Faculty I Ms. Sondra Johnson, Academic Aide I Ms. Maryln Johnson, Evening Coordinator Ms. Erma Harris, Administrative Assistant	Mr. Jimmy Butts, Chief Administrator of ALDOT and FHWA Mr. Joe Wilkerson, FHWA Mr. Bill VanLuchene, FHWA
2. Albany State University	Dr. Thomas Perry, Project Director Dr. Teresa M. Orok, Program Consultant Dr. Pamela Strong , Project Coordinator	Mr. Charles Ball, Planning Commission Mr. Rany Casagranda, Traffic Engineering Mr. Tommy Chatmon, Albany Tomorrow, Inc. Mr. Bert DelVlieger, Transit System Mr. Willie J. Griffin, DOCO School System Mr. Richard Howell, Albany Regional Airport Dr. Michael Manning, DOCO School System Mr. Bennie Russell, DOCO DFCS Mr. Wes Smith, City of Albany Engineering Department Ms. Patricia C. Thomas, DOCO DFCS Ms. Sonja Thompson, GADOT
3. Arizona State University	Ms. Mary Ann McCartney, Project Director Cathryne Jordan, Academic Prog Coordinator Ennanyek Iwysy-Antwi, Faculty Advisor Dr. Mohammed Abojaredeh, Student Coordinator/ Academic Aide Edward Wong, Student Assistant/Tutors Day Dawn Soule, Student Assistant/Tutors — Day Edward Wong, Residence Hall Student Counselors Mario Brown, Residence Hall Student Counselor Kristinia Halona, Residence Hall Student Kristinia Halona, Aerospace Engineering Briana Leon, Civil Engineering Karen Juniel, Mathematics Instructor	Mr. Bob Hollis, Arizona Division Administrator Mr. Dave Nelson, Assistant Division Administrator Mr. Dale Buskirk, Manager, Transportation Planning Group ADOT Dr. Sandra Houston, Chair, Civil and Environmental Engineering Dr. Emmanuel Owusu Antwi, Assistant Professor Ms. Mary Ann McCartney, Student Support Liaison Officer

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
4. Benedict College	Dr. Robert L. Scott , Project Director Reverend Leroy Cannon, Academic Program Coordinator Mr. John Rice, Faculty Mr. Jessie Sweat, Faculty Mr. Richard C. Thompson, Academic Aide Mr. Donald Homes, Academic Aide/Res. Hall Counselor Ms. Meniquenne Byrd, Study Group Coordinator Ms. Shemeka Hopkins, Residence Hall Counselor	Mr. Valentine Burroughs, Jr., Director of Minority Affairs Mr. Benjamin Byrd, Director of Compliance Dr. Joseph Beier, South Carolina State University Dr. Clarence W. Hill, National Resource Center Ms. Pamela Foster, Civil Rights Specialist Mr. J.H. Hood, Major Mr. James Campbell, Director of Planning Mr. James Cassidy, Training Coordinator Ms. Donna Seigler, Deputy Director of Administration Mr. Kenneth Titus, Human Resources Manager
5. Bethune–Cookman College	Dr. Aubrey E. Long, Project Director Mr. Clifford Barnes, Academic Program Coordinator Dr. Terry J. Green, Science Faculty Dr. Ranjna K. Patel, Mathematics Faculty Mr. Earl A. Burney, Jr., Leadership/Computer Mr. William J. Ziegler, Transportation Faculty Mr. Racine Stout, Senior Academic Aide Ms. Kerisotellia Ford, Senior Academic Aide Ms. Shermaine Britt, Senior Counselor Ms. Trevika Stanley, Graduate Counselor Mr. Justine Goldsmith, Senior Recreation Counselors Ms. Monika Spackova, Junior Residence Advisor Mr. Dontel Wright, Junior Residence Advisor Ms. Tamika Reed, Clerical Assistant	Ms. Shana Baker, FL Division of the FHWA Mr. Mark D. Simmons, Florida East Coast Railway Company Mr. Mark D. Simmons, Florida East Coast Railway Company Mr. Dave Brant, FLDOT Mr. Charles H. Smith Ms. Yvonne Caraway, Volusia Transit Authority

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
6. California State University (Los Angeles)	Dr. Hassan Hashemian, Project Director Mr. Milton Randle, Program Coordinator Prof. Sharri Kornblum, Faculty Dr. James Ettaro, Faculty Ms. Dominique McMillan, Staff–Recreation Coordinator Mr. Khosrow Rad, Counselor Ms. Ansel Belisle, Academic Aid Ms. Monica Bilrey, Academic Aid Mr. Efrain Velazquez, Academic Aid Mr. Mauricio Morales, Academic Aid Ms. Donna Melendez, Staff	Ms. Barbara Keller, Equal Opportunity Specialist Ms. Deirdre M. Miles–Briscoe, Equal Opportunity Specialist, FHWA Mr. Brian Gallagher, DOT
7. Cheyney University of Pennsylvania	Dr. Kwo–Sun Chu, Project Director Dr. W. Neal Holmes, Curriculum Coordinator Dr. Ayodele Aina, Faculty Dr. Sakkar Eva, Faculty Dr. Clarence Harris, Faculty Dr. Donald Mixon, Faculty Ms. Jalisa Abdur–Rahman, Residential Counselor Mr. Gregory Wilson, Residential Counselor Mrs. Lucy Countee, Secretary	Mr. William Kearny, PennDOT Ms. Kay Lovelace, Assistant Superintendent Ms. Jo Blackstone, FHWA Mr. Robert Wright, Coatesville School District Ms. Frances Treisbach, PennDOT Mr. Howard Lowman, KRAPF Transportation Co. Mr. Tom Collins, SEPTA

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
8. City College of NY	Dr. Neville A. Parker, Project Director Mr. Victor Ochieng, Program Coordinator Mr. Alberto De Los Santo, Assistant Coordinator Mr. Luz Cabreja, Guidance Counselor Mr. Musekiwa Muparanga, Guidance Counselor Ms. Camille Quamina, Guidance Counselor Mr. Zhexuan Wang, Guidance Counselor	Mr. Julian Alssid, J. Alssid Associates Ms. Dorothy Rosciszewski, PANY & NJ Mr. Oedies Davis, MTA/NYCT Ms. Rosalie David, NYC Board of Education Ms. Linda Linton, Con Edison Ms. Claire McKnight, CCNY/CUNY–ITS Mr. Robert Paaswell, CCNY/UTRC Dr. Neville Parker, CCNY/CUNY–ITS Mr. Joseph Barbra, CCNY Mr. Jose Rivera, NYSDOT Mr. Gary Schulze, MTA Mr. Authur O' Connor, FHWA Mr. Tom Sore, FHWA Mr. Kevin Walkes, CCNY/CUNY–ITS
9. Clark Atlanta University	Dr. Peter Molnar, Director STI Mr. Zachary L. Young, Program Coordinator Dr. George Japaridz, Academic Instructor Research Associate, CTSPS Ms. Titlayo Tinubu, Program Assistant Ms. Fanella Beavers, Program Assistant Mr. Olusigi Falore, Instructor	Mr. Tyrone Williams, UWSA Mr. Tommy Phillips, III, En Pointe Technologies Ms. Toni Dunagan, Parsons, Brinkerhoff, Quaid & Douglas Dr. Gloria Bromell–Tinubu, Associate Professor of Economic Dr. Glenn Rix, Director GTI Mr. Ellis Woodall, Strategic Planner Ms. Tracey France, U.S. DOT, FHWA Ms. Geraldine Moss, Delta Airlines

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
10. Delaware State University	Dr. Jan Christopher, Program Director Mrs. Doris Palmer, Program Administrator Dr. Juliet Elu, Academic Program Coordinator Mr. Ron Siebach, Technology Projects Instructor Mr. Frank Ingram, Transportation Technology Instructor Dr. Dandeson Panda, Financial Assistant Mr. William McCloud, Recreation Coordinator Ms. Ayeda Silent, Field Trip Coordinator Ms. Bernadette Kouame, Academic Aide & Translator Ms. Colina Pereira, Residence Counselor Mr. Eric Stanford, Residence Counselor Mr. Charles Bowden, Residence Counselor Ms. Nicole Nelson, Residence Counselor	Ms. Sandra R. Arnell, Office of the President Mr. Tommy L. Beatty, Division Administrator Dr. Jan E. Christopher, Associate Professor Mr. Willie E. Jones, Training Administrator Mr. Lawrence H. Klepner, Director of the T2 Center Mr. Paul J. Lang Planning and Design Engineer Ms. Doris Palmer, Director of the Office of Student Support Services Mr. Ronald G. Parr, Vice President for Business and Finance Ms. Ilene D. Payne, Director of Universities and Grants Programs
11. Elizabeth City State University	[illegible]	[illegible]
12. Florida A&M University	Dr. Charles Wright, Project Director Ms. Celia Suluki, Academic Coordinator Mr. Tory Cunningham, Male Counselor Mr. Chaun Richardson, Recreational Counselor Ms. Darlene Paton, Recreational Counselor Ms. Stacia Humphrey, Female Counselor	Mr. Marvin Williams, Transportation Engineer Mr. Shawn Murphy, Professional Engineer Training Coordinator Dr. Charles Wright, Director STI Ms. Celia Suluki, Academic Coordinator STI Mr. Roberto Escalera, Civil Rights Coordinator

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
13. Florida International University	Dr. Sylvan C. Jolibois, Jr., Institute Director/Lecturer Dr. Jose Guerrier, Lecturer Dr. N. Attoh Okine, Lecturer Dr. S. Laha, Lecturer Dr. Berrin Tansel, Lecturer Mr. C. Carnegie, Lecturer Mr. Hesham Elbadrawi, Program Manager/Lecturer Dr. Jose Guerrier, Lecturer Dr. I. Ahmad, Lecturer Ms. Diana Ospina, Lecturer Mr. Gary Holmes, Program Assistant/Lecturer Mr. Desir Jacques, Student Assistant Mrs. Ana Maria Calleja, Student Assistant Mr. Satya Pinapaka, Student Assistant Ms. Maybelline Rivas, Student Assistant Mr. Nandeshwar Mahendrakar, Student Assistant	Mr. Andy Garganta, P.E. Principal Mr. Art Kennedy, Chief of Staff Office of Congressman Alcee Hasting Ms. Melissa Roll Scott, President Conference of Minority Transportation Officials Ms. Nan Markowitz, Administrator, Human Resources, FLDOT Ms. Francine Steelman, Legal Department, FLDOT Mr. Thad Cromwell, Business & Finance Department, FLDOT Mr. Robert Escalera, STI Program Liaison Officer FHWA, FL Division, Tallahassee Ms. Clara Sidan, Project Engineer Post Buckley, Schuh and Jernigan
14. Howard University	Dr. Errol Noel, P. I. and Director Ms. Alveta Addison, Program Coordinator Ms. Sharon Boodram, Graduate Assistant Mr. Melvin Henry, Graduate Assistant Mr. Robert Thomas, Undergraduate Assistant Ms. Angele Rogers, Undergraduate Assistant	Ms. Karen Bobo, FHWA Ms. Shirley McCall, Trans Tech Academy Cardozo Senior HS Ms. Al Collins, WMATA Ms. Deborah Price, DCDOT Dr. Errol Noel, Department of Civil Engineering, Howard University Dr. Mobolaji Aluko, ECSEL Program Director Ms. Alveta Addison, School of Engineering, Howard University
15. Jackson State University	Ms. Sheila Porterfield, Project Director Academic Coordinator Faculty Resident/Activities Counselors (2)	Mr. Andrew Huges, Mississippi Division Administrator Mr. Kenneth I. Warren, Executive Director MDOT Dr. Bettye W. Fletcher, President, Jackson State University Mr. J. Baxter Burns, II, Vice President, ERGON, Inc. Ms. Beneta D. Burt, President/CEO, Jackson Urban League, Inc.

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
16. Kentucky State University	Mr. Ed Powe, STI Project Director Ms. Irma Johnson, STI Classroom Instructor Dr. John English, Design and Construction Instructor Ms. Lori Davis, Curriculum Coordinator Ms. Sylvia Mena, Student Counselor Mr. Acumoro Lake, Student Counselor Mr. Dylon Smith, Student Counselor	Mr. Ed Powe, Director of the STI Program Mr. Dennis Luhrs, FHWA Assistant Divisional Administrator Mr. Norris Beckly, Executive Director Mr. David Smith, Kentucky Transportation Cabinet Mr. Buddy Yount, FHWA
17. Lac Courte Oreilles Ojibwa Community College	Mr. Eric Vilhauer, Project Director Mr. Mike Bandow, Instructor Mr. Frank Moose, Academic Aide Ms. Rhoda Quagon, Academic Aide	Ms. Mary Williams, FHWA Mississippi Mr. John Carroll, WisDOT Mr. Mike Bandow, LCOOCC STI Instructor Mr. Eric Vilhauer, LCOOCC STI Project Director
18. Lincoln University (Pennsylvania)	Dr. Iz Osayimwese, STI Director Dr. Ganga Ramdas, Program Academic Coordinator Dr. Robert Millette, Faculty Dr. Patricia Joseph, Faculty Ms. Eyimofe Oduneye, Academic Aide Ms. Dalia Millette, Residential Counselor Mr. Jean Lousi Robinson, Residential Counselor Mr. Robert Woodbright, Recreation Coordinator	Dr. Arnold Hence, VP Enrollment Planning and Student Life Mr. William Kerney, Bureau of Equal Opportunity Ms. Jo Backstone, Director Equal Opportunity, USDOT Ms. Frances Treisbach, Bureau of Planning and Research Mr. Fred Hartman, Bureau of Equal Opportunity Mr. Bob Hall, FHWA, PA Division Office Mr. Howard Lowman, Krapf Transportation Company Mr. Robert Wright, Coastville Area School District Dr. Daniel L. Miefou, Cheyney University Ms. Skkal Ala Eva, Cheyney University Dr. Mohammad B. Chaudhary, Cheyney University Dr. Kwo Sun Chu, Chaudhary, Dr. Clarence Harry, Cheyney University Dr. Ayodele Aina, Chyney University Dr. Neal Holmes, Cheyney University Dr. Iz Osayimwese, STI Director

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
19. Morgan State University	Ms. Joyce Trussell, Project Director Ms. Sarah Aura, Administrative Assistant Mr. Scott Muhammad, Instructor Ms. Daya Foster, Counselor Ms. Angela Smith, Counselor Mr. Olakunle Adebowale, Counselor	Mr. Faizon Ragin, Baltimore City Public Schools Ms. Peggy Burghauser, MDOT, State Highway Administration Mr. Vernon Simms, Office of Congressman Elija Cummings Mr. Murray Piper (Chair), FHWA, Maryland Division Ms. Carolyn Jasmine, MDOT, Office of Fair Practices Ms. Sandra Talbert-Jackson, FHWA, Maryland Division Mr. Roland Wilson, NST Administration
20. North Carolina A&T State University	Ms. Joyce H. Johnson, Director Ms. Regina B. Artis, Program Coordinator Mr. Thomas L. Barksdale II, Assistant Program Coordinator Mr. Gilbert Casterlow, SAT Preparatory Workshop Facilitator Ms. Tomica Wright, Student Assistant Mrs. Deborah P. Underwood, Financial Officer Ms. Cassandra K. Rogers, Technology Transfer Coordinator Ms. Lisa Ray, Processing Assistant Ms. Phyllis Boone, Office Assistant Ms. Carolyn Wright, Office Assistant	Mr. Nicholas Graf, North Carolina Division Administrator Mr. Robert Mathes, Business Development and Civil Rights Section Mr. Dale Fisher, Assistant Vice President, Customer Services Mr. Michael Simmons, Chair, Department of Economics and Transportation/Logistics Ms. Vida Covington, Transit Services Planner Ms. Joyce Johnson, Director, Transportation Institute
21. Northwest Indian College	Not Available	Not Available

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
22. South Carolina State University	Dr. Joseph H. Beier, Project Director Ms. Janice Guinyard, Administrative Assistant Mrs. Vivian Johnson, Administrative Assistant Mr. Francis Ayers, Faculty Mr. Jimmy Patterson, Faculty Mrs. Mary Stroman, Academic Aide Ms. Tressa Glover, Support Activities Coordinator Mr. Collie Rayford, Recreation Coordinator Ms. Evangelina Hammond, Residence Hall Counselor Mr. Karenski Brown, Residence Hall Counselor Mr. Anthony B. Caldwell, System Administrator	Ms. Donna Seigler, Columbia Metropolitan Airport Mr. Robert Scott, Benedict College Mr. David Lee, FHWA Mr. Derrell Turner, FHWA Mr. Ben Martin, SC Department of Education Mr. Valentine Burroughs, SCDOT Mr. Jimmy Campbell, SCDOT Mr. William DuBose, SCDOT Ms. Patricia Harrison, SCDOT Ms. Vivian McCravy, SCDOT Ms. Vivian Patterson, SCDOT Ms. Arlene Prince, SCDOT — Mass Transit Mr. Roy Tucker, SCDOT — Mass Transit Ms. Allison Phillips, SC Public Safety Major J.H. Hoo, SC Public Safety Dr. Joseph Beier, SCSU
23. Southern University and A&M College	Dr. Patrick Carriere, Project Director Dr. Robert A. Johnson, Asst Prof of Mathematics Ms. Brenda Monerieff, SU Laboratory School Mr. Jeffery Thomas, Instructor of Mathematics Mr. Percy Square, SU School of Law Mr. Henry Combs, SU Laboratory School Ms. Christina Rock, Academic Aide Ms. Chystelle Williams, Academic Aide Ms. Veronica Bynum, Administrative Assistant	Mr. Babak Naghavi, LA Transportation Research Center Mr. Joseph Baker, LA Transportation Research Center Mr. Frank Grabski, LA FHWA Ms. Frances Gilson, LADOT Mr. Wilbert Ferdinand, Jr., Exxon Company Mr. Ken Adkins, ABMB Engineers, Inc. Ms. Sarah Johnson, Southern University and A&M College

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
24. Tennessee State University	Dr. Decatur B. Rogers, Project Director Mrs. Loretta Green, Program Coordinator Ms. Rayvelyn DeJarnett, Program Manager Ms. Brianna Carter, Algebra I Mr. Kabir Small, Algebra II Ms. Shunthell Scott, Computer Science I Mr. Kalvin Davis, Computer Science II Mr. Glenn Cornne, AutoCAD Lab Mr. Julius Lockett, Propeller Thrust Lab Mr. Gino Jones, Drag Wind Tunnel Lab Mr. John Thompson, Engine Performance Lab Mr. Steevon Hunter, Transportation Issues Ms. Brianna Carter, Counselors Dormitory (Females) Mr. Julius Lockett III, Counselors Dormitory (Males) Ms. Monica Overton, Program Secretary Mr. Rogers Williams, Program Technician Mrs. Loretta Green, Program Director	Mr. Glenn A. Beckwith, P.E., Transportation Director Planning Division Mr. Warren R. Bennett, Jr., Computer Scientist Ms. Bonnie H. Brothers, Transportation Manager — Mapping and Statistics Office Mr. Melvyn R. Cooper, Division Realty Officer, FHWA Dr. James Garrett, Coordinator of Minority Affairs Mr. Robert W. Morley, Affirmative Action Officer Mr. Alvin H. Pearson, Administrative Director Civil Rights Office

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
25. Texas A&M Research Foundation	Dr. Naomi Lede, Director Dr. Beverly Kuhn, TX Transportation Institute Mr. Isaac Netted, Professor TSU Mr. Peter Dittmer, Assistant Professor TSU Dr. Carol Lewis, Director — CTTR TSU	Mr. Dock Burke, Director SU Transportation Center Mr. Victor H. Burke, Executive VP Dallas Area Rapid Transit Mr. Alan Clark, Manager Houston -Galveston Area Council Mr. Peter Dittmer, Assistant Professor, TSU Dr. Daniel Fambro, Asst Professor Texas A&M Research Foundation Ms. Linda Howard, Aviation Division Ms. Mona W. Howard, Chair, Div of Prof Studies, Paul Quinn Mr. Jerry Jones, FHWA Dr. Beverly Kuhn, Division Head Texas Tran. Dr. Naomi Lede, Senior Research Scientist Ms. Jessica Lennon, Supervisor, Transit Education Outreach Dr. Carol Lewis, Director — CTTR TSU Mr. Michael Morris, NC Texas Council of Governments Mr. Jay Nelson, Dallas District Engineer TXDOT Mr. Isaac Netted, Professor TSU Mr. Mark Olson, Traffic Operations Engineer Dr. Herb Richardson, Director TX Transportation Institute Ms. Linda Splat, Director, Cont Ed Paul Quinn College Mr. Gary Triptych, District Engineer TXDOT Dr. Tom Urbanik, TX Transportation Institute Dr. Lei Yu, Professor & Department Head TSU
26. Tuskegee University	Mr. Garry Quinn, Project Director Ms. Leslie Trimble, Academic Program Coordinator Mr. Khary Parker, Faculty Mr. Marcus Claibourne, Faculty Mr. Mark Freeman, Faculty Ms. Brenda Cherry, Faculty Ms. Linda Jones, Faculty Mrs. Louise Upchurch, Counselor/Academic Aide Ms. Sendena Stewart, Counselor/Academic Aide Mr. Clinton Robinson, Counselor/Academic Aide	Mr. Joe Wilkerson, Division Administrator Mr. Bill VanLuchene, Environment and Technology Engineer Mr. Ronald J. Green, Executive Assistant Dr. Benjamin Newhouse, Dean of the College of Business Dr. Vascar Harris, Professor of Aerospace Engineering Dr. Charles Thompson, Owner of Charlie T's Tuskegee Mr. Russell Johnson, Results Management Associates

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
27. University of Arkansas at Pine Bluff	Mrs. Felicia Williams, Project Director Mr. Oscar Dean, Faculty I Ms. Katherine Compton–Stevenson, Academic Program I/Laboratory Mr. Oscar Dean Academic Program Director Mr. Ronald Laurent, Support Services/Rec Coord Mr. Roosevelt Bonner, Jr., Male Counselor Mrs. Evelyn Williams, Female Counselor	Mrs. Lavern Collier, Secretary Mr. Oscar Dean, Teacher, Dunbar Junior High Ms. Sandra Hayes, Assistant Division Administrator Ms. Valera McDaniel, Personnel Specialist
28. University of Missouri–Rolla	Dr. Gary S. Spring, Director Ms. Lelia Flagg, Administrative Coordinator Mr. Don (Coach) Knapp, Academic Coordinator Ms. Marsha Grayer, Academic Coordinator Ms. Amanda Garrison, Program Assistant Mr. Jason Jones, Program Assistant Mr. Brad Winters, Program Assistant Ms. Amanda Withers (Mandy), Program Assistant	Mr. Lenell Allen, Assistant Director Mr. Robert E. Berry, Vice President Ms. Gloria Larivee Mr. Arthur Lieber, President Ms. Gabrielle Mack, Vice President, Diversity Mr. Joe Murray, Division Engineer Mr. Glenn Smith, Civil Rights Officer Ms. Sherrie Koechling Andrae, Academic Coordinator
29. Virginia State University	Dr. Ali Anser, Project Director Mr. Kwame Adom Mr. Dennis Seward Ms. Lilibeth de los Santos Ms. Rebecca Evans Mr. Fredie Jones Ms. Judy Williams	Adom, K., VSU Anser, A., VSU Sirilharn, S., VSU Evance, R., Matoca High School Fonseca Martinez, R., FHWA Gehr, D., VDOT Jones, F., VDOT Leete, D., FHWA Lyons, L., VSU Seward, D., VSU Betty Wilson, Department of Aviation

APPENDIX D —
HOST SITE STAFF AND INTERMODAL ADVISORY BOARD

Name	Staff Members	Intermodal Advisory Board
30. West Virginia State College	Dr. Robert Harris, Project Director/Academic Coordinator/Instructor Mr. Robert Pratt, Project Co-Director/ Facilitator/Instructor Ms. Kellie Dunlap, Enrichment/Rec Coord, Head Counselor Ms. Dana Glenn, Chair of the STI Advisory Board Mr. Dave Leighow, Instructor/Field Trip Facilitator Ms. Erica Allen, Resident Student Counselor Ms. Charmaine Parrish, Resident Student Counselor Mr. Jessie Anderson, Resident Student Counselor Mr. Gary Lahnam, Instructor Mr. Alta McDaniel, Instructor Mr. Thomas Swanke, Instructor Mr. Gary Greer, Instructor Ms. Lisa Gatens, Instructor Mr. Steve Price, Bus Driver	Mr. Michael L. Woods, Safety inspector, Federal Railroad Administration Mr. Tony Smedley, WV Department of Education Ms. Jeannie D. Simms, FHWA, WV Mr. Robert Pratt, Certified Real Estate Appraiser, Appraisal Asst. Mr. Orlando Lewis, Assistant Vice President of Student Affairs Mr. Dave Leighow, FHWA, WV Ms. Philippa White, EEO Officer, WVDOT Mr. Orlando McMeans, Director of Land Grant Programs, WVSC Ms. Kellie Dunlap, Counselor Dr. Robert Harris, Assistant Professor Biology, WVSC Ms. Dana Glenn, Director of Sponsored Programs, WVSC

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

1. *Alabama A&M University*	Sparkman HS 2616 Jeff Rd. Harvest, AL Chapman MS 2006 Ruben Dr., NW Huntsville, AL 35811 Buckhom HS 4123 Winchester Rd. New Market, AL	Huntsville HS 2304 Billie Watkins Rd. Huntsville, AL 35801 Davis Hills MS 3221 Mastin Lake Rd. Huntsville, AL 35810 J.O. Johnson 6201 Publo Huntsville, AL 35810
2. *Albany State University*	Lee HS 606 Forest Cir. Huntsville, AL 35811 Westover HS 2600 Partridge Ave. Albany, GA 31707 Monroe HS 900 Lippitt Dr. Albany, GA 31701 Dougherty HS 1899 Pearce Ave. Albany, GA 31707	Westminster Christian Academy 1400 Evangel Dr., NW Huntsville, AL 35816 Albany HS 801 Residence Ave. Albany, GA 31701 Mitchell–Baker 1000 Newton Rd. Camilla, GA 31730

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

3. ***Arizona State University***	Hendrix JH 1550 West Summit Pl. Chandler, AZ 85224 Cibola HS 4100 West 20th St. Yuma, AZ 85364 Tochatchi HS 1 Cougar Trail Tochatchi, NM 87325 McClintock HS 1830 East Del Rio Tempe, AZ 85282	Buckeye HS 902 Eason Ave. Buckeye, AZ 85326 Chandler HS 350 North Arizona Ave. Chandler, AZ 85224 Dysart HS 11405 North Dysart Rd. Dysart, AZ 85335 Metro Tech 1900 West Thomas Rd. Phoenix, AZ 85015
4. ***Benedict College***	C.E. Murray HS P.O. Box 188 Greeleyville, SC 29056 Rock Hill HS 320 West Springdale Rd. Rock Hill, SC 29730 West Florence HS 221 North Beltline Dr. Florence, SC 29501 Dreher HS 701 Adger Rd. Columbia, SC 29210 Wade Hampton HS P.O. Box 338 Hampton, SC 29224 South Florence HS 3200 South Irby St. Florence, SC 29505 Orangeburg–Wilkinson HS 601 Bruin Pkwy. Orangeburg, SC 29115	Hemingway HS P.O. Box 1430 Hemingway, SC 29554 Timmonsville HS 517 West Market St. Timmonsville, SC 29161 Columbia HS 1701 Westchester Dr. Columbia, SC 29210 Ben Lippen 7401 Monticello Rd. Columbia, SC 29203 Barnwell HS 474 Jackson St. Barnwell, SC 29812 Socastee HS 4900 Socastee Blvd. Myrtle Beach, SC

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

5. ***Bethune–Cookman College***	South Miami Senior HS 6856 SW 53rd St. Miami, FL 33142	Mainland HS 125 South Clyde Morris Blvd. Daytona Beach, FL 32114
	Forest Glen MS 6501 Turtle Run Blvd.	Apopka HS 555 West Martin St. Apopka, FL 32712
	Chocktawhatchee HS 110 Northwest Racetrak Rd. Ft. Walton Beach, FL 32548	Fort Walton Beach HS 400 SW Hollywood Blvd. Ft. Walton Beach, FL 32547
	Manatee HS 1 Hurricane Ln. Bradenton, FL 34205	Coral Reef Senior HS 10101 SW. 152nd St. Miami, FL 33157
	Suncoast Com. HS 600 W. 28th St. Riviera Beach, FL 32548	Miami Northwestern Senior HS 1100 Northwest 16th Ave.
	Land O'Lakes HS 20325 Gator Ln. Land O'Lakes, FL 34639	Piper HS 8000 NW 44th Sunrise, FL 33351
	Seabreeze HS 2700 North Oleander Daytona Beach, FL 32118	Belleview HS 10400 SE 36th Ave. Belleview, FL 34420
	Sandalwood HS 2750 John Prom Blvd. Jacksonville, FL 32225	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

6. ***California State University (Los Angeles)***	Blair HS 1201 South Marengo Ave. Pasadena, CA 91106 Gabrielino HS 1440 Lafayette St. San Gabriel, CA 91776 Glendale SH 1140 East Broadway Glendale, CA 91205 John Marshall HS 3939 Tracy St. Los Angeles, CA 90027 Bishop Amat Memorial HS 14301 Fairgrove Ave. La Puente, CA 91743 Pasadena HS 2925 E. Sierra Madre Blvd. Pasadena, CA 91107 Schurr HS 820 North Wilcox Ave. Montebello, CA 90640 Don Bosco Technical 1151 San Gabriel Blvd. Rosemead, CA 91770	Alhambra HS 101 South Second St. Alhambra, CA 91106 Temple City HS 9501 East Lemon Ave. Temple City, CA Lincoln HS 3501 North Broadway Los Angeles, CA 90031 Arcadia HS 180 Campus Dr. Arcadia, CA 91007

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

7. ***Cheyney University of Pennsylvania***	Central HS Olney & Ogontz Ave. Philadelphia, PA 19154 Springfield HS 49 West Leamy Ave. Springfield, PA 19064 Chichester HS Chichester Ave. Boothwyn, PA 19016 Malvern Prep Warren Rd. Malvern, PA Murray Ave. School 2551 Murray Ave. Huntingdon Valley, PA 19006 Stath Haven HS 205 South Providence Rd. Wallingford, PA 19086 *Benjamin Franklin* HS Broad & Green St. Philadelphia, PA 19121 Chester HS 200 West 9th St. Chester, PA 19013	William Penn HS Exxess Ave. Lansdowne, PA 19050 Coatesville Area HS 1445 East Lincoln Hwy. Coatesville, PA 19320 Chester HS Academy Perry Building, 7th & Fulton Chester, PA 19013 Coatesville Inter. School 1445 East Lincoln Hwy. Coatesville, PA 19320 Henderson HS 400 Montgomery Ave. West Chester, PA 19380 E.T. Richardson MS 20 West Woodland Ave. Springfield, PA 19264

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

8. ***City College of New York***	Transit Tech 1 Wells St. Brooklyn, NY 11208 Manhattan Center for Science & Math E116 St. & FDR New York, NY 10029 W.E. Grady Tech. 25 Brighton, 4th Rd. Brooklyn, NY 11235 Cathedral HS 350 East 56th St. New York, NY 10022	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

9. ***Clark Atlanta University***	Fayette County HS 1 Tiger Trail Fayetteville, GA South Atlanta HS 800 Hutches Rd. Atlanta, GA 30354 North Atlanta HS 2875 Northside Dr., NW Atlanta, GA 30305 Lithonia HS 2451 Randall Ave. Lithonia, GA 30058 Sandy Creek HS 360 Jenkins Rd. Tyrone, GA 30290 Prince Williams HS Cow Pen Rd. P.O. Box 2198 Nassau, Bahamas St. Augustine College P.O. Box N-3940 Nassau, Bahamas	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

10. ***Delaware State University***	Postlethwait MS S. State St. Camden, DE 19934 Caesar Rodney SH 239 Old N. Rd. Camden, DE 19934 Sussex Technical HS P.O. Box 351 Georgetown, DE 19947 Polytech HS P.O. Box 97 Woodside, DE 19980 Milford HS 1019 N. Walnut St. Milford, DE 19963 Dover HS 1 Pat Lynn Dr. Dover, DE 19904 Eleanor Roosevelt SH 7601 Hanover Pkwy. Greenbelt, MD 20770 Lake Forest SH 5407 Killens Pond Rd. Harrington, DE 19943	Mt. Pleasant HS 5201 Washington St. Wilmington, DE 19809 Christina HS 190 Salem Church Rd. Newark, DE 19713

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

11. *Elizabeth City State University*	John A. Holmes HS Edenton, NC 27932 Northeastern HS Elizabeth City, NC 27909 Plymouth HS P.O. Box 827 Plymouth, NC 27962 Gates County HS 088 Hwy 158, W Gatesville, NC 27938 Perquimans HS 305 S. Edenton Rd. Hertford, NC 27944	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

12. *Florida A&M University*	Navarre HS 8600 High School Blvd. Navarre, FL 32566 Williams MS 5020 N. 47th St. Tampa, FL 33610 Forest Hill Community HS 6901 Parker Ave. West Palm Beach, FL 33405 Greensboro HS P.O. Box 10 Greensboro , FL 32330 Dearlake MS 9902 Dearlake West Tallahassee, FL 32312 A. Philip Randolph Academies of Technology 1157 Golfair Blvd. Jacksonville, FL 32209 Chiefland MS 811 NW 4th Dr. Chiefland, FL 32626 Carter Parramore MS 631 S. Steward St. Quincy, FL 32351 Griffin MS 800 Alabama St. Tallahassee, FL 32304	Florida State University HS FSU Box 4420 Tallahassee, FL 32306 Winter Springs HS 130 Tuscavilla Rd. Winter Springs, FL 32708 Middleton MS of Technology 4302 24th St. Tampa, FL 33610 Lincoln HS 3838 Trojan Trail Tallahassee, FL 32311 Malone HS 5361 19th St. Malone, FL 32445 South Lake HS 15600 Silver Eagle Rd. Groveland, FL 34736 R. J. Murray MS 150 N. Holmes Blvd. St. Augustine, FL 32095 Brandon HS 306 Knights Blvd. Brandon, FL 33510 Florida A&M University HS P.O. Box A-19 Tallahassee, FL 32307

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

13. ***Florida International University***	American SH 18350 NW 67th Ave. Hialeah, FL 33015 Coral Reef HS 10101 SW 152nd St. Miami, FL 33157 Hialeah Miami Lakes SH 7977 W. 12th Ave. Hialeah, FL 33012 Miami Edison SH 6161 NW 5th Court Miami, FL 33127 Palmetto SH 7460 SW 118th St. Pine Crest, FL 33156 North Miami SH 800 NE 137th St. North Miami, FL 33161 Miami North Western HS 7007 NW 12th Ave. Miami, FL 33150	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

14. *Howard University*	Cardoza HS 1300 Clifton St., NW Washington, DC	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

15. ***Jackson State University***	Humphrey County HS 701 Cohn St. Belzoni, MS 39038 Wilkinson County HS Woodville, MS 39669 Hattiesburg MS 501 Hutchinson Ave. Hattiesburg, MS 39401 South Delta HS 600 South Pkwy. Rolling Fork, MS 39159 Newton County HS Decatur, MS 39332 Thomastown Attendance Center South Panola HS Batesville, MS 38614 Oklona HS Oklona, MS 38860 East Marion HS 527 East Marion Rd. Columbia, MS 39429 Coahoma Agriculture HS Clarksdale, MS 38614	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

16. ***Kentucky State University***	Lexington Catholic 2250 Clays Mill Rd. Lexington, KY 40503 Owen County HS Georgetown Rd. Owentown, KY 40359 Grant County HS 715 Warsaw Rd. Dry Ridge, KY 41035 Paul Laurence Dunbar 1600 Man O'War Blvd. Lexington, KY 41035 Russellville HS Clarksville Rd. Russellville, KY 42276 Scott County HS 1080 Longlick Pike Georgetown, KY 40324 Louisville Male 4409 Preston Hwy. Louisville, KY Shawnee HS 4018 Shawnee Rd. Shawnee, KS	Roger Bacon HS 4320 Vine St. Cincinnati, OH 45217 Dupont Manual HS 120 W. Lee St. Louisville, KY 40208

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

17. *Lac Courte Oreilles Ojibwa Community College*	LCO Ojibwa School 8575 N. Round Lake Rd. Hayward, WI 54843 Winter HS Winter, WI Home-Schooling 12371 W. County Rd. Couderay, WI 54828	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

18. ***Lincoln University (Pennsylvania)***	Showalter MS 9th & Lloyd St. Chester, PA 19013 Pulaski MS 2820 W. 7th St. Chester, PA 19013 Martin Luther King HS 17th & Spring Garden St. Philadelphia, PA 19138 Jay Cooke MS 13th & Louden St. Philadelphia, PA 19141 Roxbough HS Ridge Ave. and Fountain St. Philadelphia, PA 19128 Olney HS Front & Duncannen St. Philadelphia, PA 19120 Martin Luther King HS Stenton Ave. & Haines St. Philadelphia, PA 19130 Penn Treaty MS E. Thompson & Montgomery Philadelphia, PA 19125	Parkway HS 4901 Chestnut St. Philadelphia, PA 19125

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

19. ***Morgan State University***	Baltimore City College & HS 3320 The Alameda Baltimore, MD 21218 Carver Center for Arts & Technology 938 York Rd. Towson, MD 21204 Walbrook HS 2000 Edgewood St. Baltimore, MD 21216 Institute of Notre Dame 901 Asquith St. Baltimore, MD 21202 Western School of Technology & Environmental Science 101 Kenwood Ave. Baltimore, MD 21228 Randallstown HS 4000 Offutt Rd. Randallstown, MD 21133 Mergenthaler Vocational HS Hillen Rd. & 35th St. Baltimore, MD 21218 Seton Keough HS 1201 Caton Ave. Baltimore, MD 21227	The Catholic HS of Baltimore 2800 Edison Hwy. Baltimore, MD 21218 Western HS 4600 Falls Rd. Baltimore, MD 21209 Patterson HS 100 North Kane St. Baltimore, MD 21062 Joppatowne HS 555 Joppa Farm Rd. Joppatowne, MD 21085 Forest Park HS 3701 Eldorado Ave. Baltimore, MD 21207

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

20. ***North Carolina A&T State University***	Southeast Guilford HS 4530 SE School Rd. Greensboro, NC 27406 Reidsville HS 1901 S. Park Dr. Reidsville, NC 27320 Page HS 201 Alma Pinnix Dr. Greensboro, NC 27405 Dudley HS 1200 Lincoln St. Greensboro, NC 27405 Southwest Guilford HS 4364 Barrow Rd. High Point, NC 27265 NC School of Science & Mathematics 1219 Broad St. Durham, NC 27705	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

21. ***South Carolina State University***	Chavis Middle School P.O. Box 1449 Hemingway, SC 29554 Wade Hampton 100 Pine Knoll Dr. Greenville, SC 29069 Loris HS 301 Heritage Rd. Loris, SC 29569 Southside HS 100 Blassingame Rd. Greenville, SC 29652 Greenville Technical Center P.O. Box 5616 Greenville, SC 29606 Carolina Academy 2725 Old Anderson Rd. Greenville, SC 29611 Berea HS 515 Berea Dr. Greenville, SC 29617 Hillcrest HS 3665 S. Industrial Dr. Simpsonville, SC 29681	Kingstree JH 710 3rd St. Kingstree, SC 29556 Greer HS 3000 E. Gap Creek Rd. Greer, SC 2 9651 Parker Academy 900 Woodside Ave. Greenville, SC 29611 Lincoln HS 714 Lincoln Rd. McClellanville, SC 29458 Greenville HS Felton Laboratory School 300 College St., NE SCSU Orangeburg, SC 29117 Spring Valley HS 120 Sparkle Berry Ln. Columbia, SC 29223 West Florence HS Beltline Dr. Florence, SC 29501

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

21. ***South Carolina State University*** **(cont'd)**	Orangeburg–Wilkinson HS 601 Bruin Pkwy. Orangeburg, SC 29115 Andrews HS 201 S. Maple Andrews, SC 29510 Irmo HS 6671 St. Andrews Rd. Columbia, SC 29212 Dent MS 6950 N. Trenholm Rd. Columbia, SC 29206 Rock Hill HS 320 W. Springdale Rd. Rock Hill, SC 29730 Columbia HS 1701 Westchester Dr. Columbia, SC 29210 Sumter HS 2580 McCray's Mill Rd. Sumter, SC 29150 Lancaster HS 617 Normandy Rd. Lancaster, SC 29720	Hunter–Kinard Tyler HS 7066 Norway Rd. Neeses, SC 29107 Mauldin HS 701 E. Butler Rd. Mauldin, SC 29662 Allendale–Fairfax MS Hwy. 378 Allendale, SC 29810 James L. Mann Greenville, SC 29611 Greenville Senior Academy Greenville, SC 29611

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

22. ***Southern University and A&M College***	McKinley SH 800 E. McKinley Baton Rouge, LA 70802 Belaire HS 12121 Tams Dr. Baton Rouge, LA 70815 Istrouma HS 3739 Winbourne Ave. Baton Rouge, LA 70805 Redemptorist SH 4000 Gerard Ave. Baton Rouge, LA 70805 Baker HS 3200 Groom Rd. Baker, LA 70714 LSU Lab Dalrymple Dr. Baton Rouge, LA 70803 Hazelhurst HS 101 S. Haley St. Hazelhurst, MS 39083 SU Lab 120 Swan St. Baton Rouge, LA 70813	Baton Rouge Magnet 2825 Government St. Baton Rouge, LA 70806 Broadmoor HS 10100 Goodwood Blvd. Baton Rouge, LA 70815 Scotlandville Magnet 9870 Scotland Dr. Baton Rouge, LA 70807 Woodlawn HS 14939 Tiger Bend Rd. Baton Rouge, LA 70817 Zachary HS 4100 Bronco Ln. Zachary, LA 70791

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

23. ***Tennessee State University***	J.T. Moore MS 4425 Granny White Pike Nashville, TN 37024 Brentwood HS 5304 Murray Ln. Brentwood, TN 37207 Woodland MS 1500 Volunteer Pkwy. Brentwood, TN 32027 Apollo MS 631 Richards Rd. Antioch, TN Maplewood Comprehensive HS 401 Maplewood Ln. Nashville, TN 37216 Cameron MS 1034 1st Ave., South Nashville, TN 37210 Hume-Fogg Magnet HS 700 Broadway Nashville, TN 37203 Riverside School P.O. Box 80 Avon, MS 38723	Jefferson MS 200 Fairbanks Rd. Oak Ridge, TN 37830 East Literature Magnet School 112 Gallatin Rd. Nashville, TN 37206 Goodlettsville MS 300 S. Main St. Goodlettsville, TN 37072 Kirby MS 1725 Brookfield Ln. Birmingham, AL 35214 Centennial HS 5050 Mallory Ln. Franklin, TN 37067 Pearl Cohn HS 904 26th Ave., North Nashville, TN 27208 Austin East HS 2800 Martin Luther King Jr. Ave. Knoxville, TN Martin Luther King Magnet HS 613 17th Ave., North Nashville, TN

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

23. ***Tennessee State University*** **(cont'd)**	Raleigh Egypt MS 4215 Alice Ann Memphis, TN 38128 Nashville School of the Arts 3500 Hydes Ferry Pike Nashville, TN 37214 East HS 3206 Poplar Ave. Memphis, TN 38111 Hillsboro HS 3812 Hillsboro Pike Nashville, TN 37215 Antioch HS 1900 Hobson Pike Antioch, TN 37012	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

24. *Texas Transportation Institute* *Texas A&M Research Foundation* *Texas Southern University* *Paul Quinn College*	Lake Highlands HS 9449 Church Rd. Dallas, TX 75238 South Oak Cliff HS 3601 S. Marsalis Ave. Dallas, TX 75216 Moises Molina HS 2355 Duncanville Rd. Dallas, TX 75211 Yvonne A. Ewell Townview Ctr. 1201 E. 8th St. Dallas, TX 75203 Booker T. Washington HS 2501 Flora St. Dallas, TX 75215 Berkner HS 1600 E. Spring Valley Richardson, TX 75081 Duncanville HS 7101 W. Wheatland Rd. Duncanville, TX 75116 Lincoln HS 2826 Hatcher St. Dallas, TX 75215	Ross S. Sterling HS 11625 Martindale Rd. Houston, TX 77048 M.B. Smiley HS 10725 Mesa Rd. Houston, TX 77078 Wunderlich HS 11800 Misty Valley Dr. Houston, TX 77066 Ft. Dorchester HS 8500 Lincoln Blvd. Charleston, SC 29420 Middle College for Technology Careers 3100 Cleburne Ave. Houston, TX 77048

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

25. ***Tuskegee University***	Booker T. Washington 3803 W. Martin Luther King Hwy. Tuskegee, AL 36083 East Limestone HS East Limestone Rd. Athens, AL 35613 Fairfield HS 610 Valley Rd. Fairfield, AL 35064 Deshler HS 200 E. Commons St. Central HS 1715 Martin Luther King Jr. Blvd. Tuscaloosa, AL 35401 W.D. Muhammed HS 735 Fayetteville Rd. Atlanta, GA 30316 Georgia Washington Georgia Washington Rd. Pike Road, AL 36064 Sandy Creek HS 360 Jenkins Rd. Tyrone, GA 30290	John Carroll HS 300 Lakeshore Pkwy. Birmingham, AL 35219 Holy Family HS 2001 19th St. Ensley Birmingham, AL 35218 St. Jude Institute 2048 W. Fairview Ave. Montgomery, AL 36108

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

26. ***University of Arkansas at Pine Bluff***	Horace Mann Arts & Sciences JH 1000 E. Roosevelt Rd. Little Rock, AR 72206 Dollarway JH 2602 Fluker Pine Bluff, AR 71601 Lakeside MS 1110 S. Lakeshore Dr. Lake Village, AR 71653 McGehee HS P.O. Box 767 McGehee, AR 71654 Southwest JH 3301 Bryant St. Little Rock, AR 72204 Mabelvale JH P.O. Box 187 Mabelvale, AR 72103	

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

27. ***University of Missouri–Rolla***	Mary Institute Country Day 101 N. Warson Rd. St. Louis, MO 63124 Hazelwood East 11300 Dunn Rd. St. Louis, MO 63138 Gateway Institute of Technology 5101 McRee Ave. St. Louis, MO 63110 Pattonville Senior HS 2497 Creve Coeur Mill Rd. Maryland Heights, MO 63043 Jennings SH 8850 Cozens Ave. Jennings, MO 63136 Rolla SH 900 Bulldog Run Rolla, MO 65401 Parkway West HS 14653 Clayton Rd. Ballwin, MO 65401 St. Louis Career Academy 3020 B. Ballas Rd. St. Louis, MO 63131	Westminster Christian 10900 Ladue Rd. St. Louis, MO 63141 Clayton HS 1 Mark Twain Cir. St. Louis, MO 63105 Hazelwood Central 15975 New Halls Ferry Rd. Florissant, MO 63031 McCluer HS 1896 S. New Florissant Rd. Florissant, MO 63031 Metro HS 4015 McPherson St. Louis, MO 63108

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

28. ***Virginia State University***	Matoaca HS 6001 Hickory Rd. Ettrick, VA 23803 N.B. Clements 7000 Prince George Dr. Prince George, VA 23875 James River HS 2701 Robious Crossing Dr. Midlotian, VA 23113 Carver MS 3800 Cougar Trail Chester, VA 23831 Chicago HS for Agricultural Sciences 3857 W. 111 St. Chicago, IL 60655 Dan River HS 100 Dan River Wildcat Ringgold, VA 24586 Bayside HS 4960 Haygood Rd. Virginia Beach, VA 23455 Greenville County HS 403 Harding St. Emporia, VA 23847	Phoebus HS 100 Ireland St. Hampton, VA 23663 St. Albans Mount St. Albans Washington, DC 20016 John F. Kennedy HS 2300 Cool Ln. Richmond, VA 23223 Hopewell HS 400 S. Mesa Dr. Hopewell, VA 23860 Colonial Heights HS 3600 Conduit Rd. Colonial Heights, VA 23834 Colonial Heights MS 500 Conduit Rd. Colonial Heights, VA 23834 Huguenot HS 7945 Forest Hill Ave. Richmond, VA 23225 Mills E. Goodwin HS 2101 Pump Rd. Richmond, VA 23233

APPENDIX E —
Middle and High Schools Represented
(MS=Middle School; HS=High School; JH=Junior High; SH=Senior High)

29. ***West Virginia State College***	McKinley JH St. Albans, WV 25177 Scott HS 1 Skyhawk Pl. Madison, WV 25130 George Washington HS 1522 Tennis Club Rd. Charleston, WV 25314 Nitro HS 1300 Park Ave. Nitro, WV Buffalo HS 3317 Buffalo Rd. Buffalo, WV 25033 South Charleston HS 1 Eagle Way South Charleston, WV Dunbar JH 325 27th St. Dunbar, WV 25064 Sissonville HS 6100 Sissonville Dr. Charleston, WV	Winfield HS 3022 Winfield Rd. Winfield, WV Spring Valley HS 1 Timberwolf Ln. Huntington, WV 25704